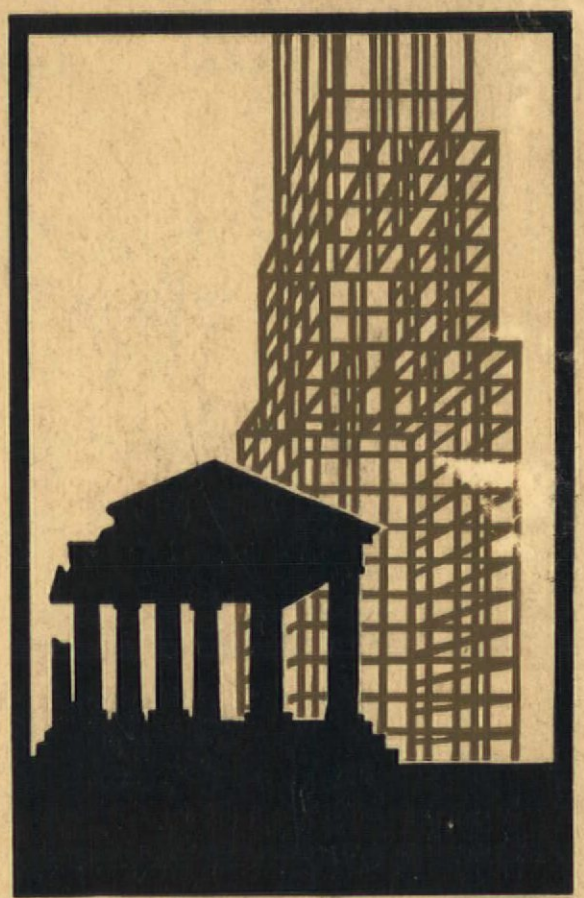
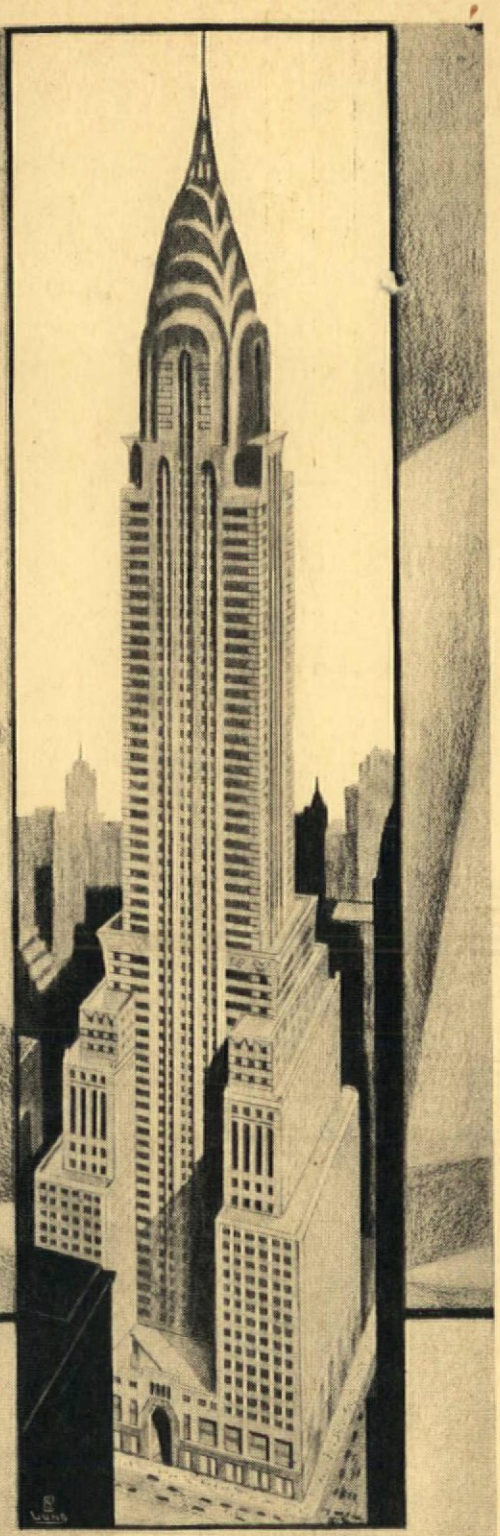
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THE ARCHITECTURAL RECORD

Published Monthly by F. W. Dodge Corporation, 115–119 W. 40th St., New York

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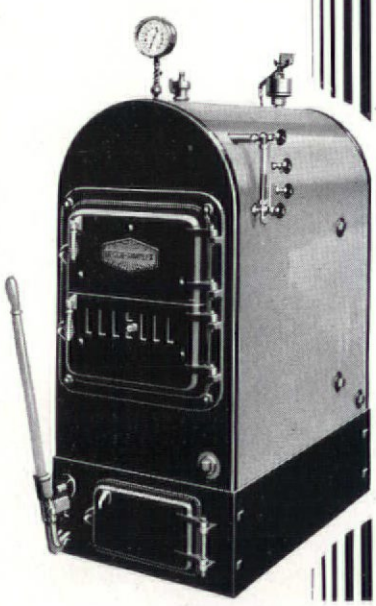
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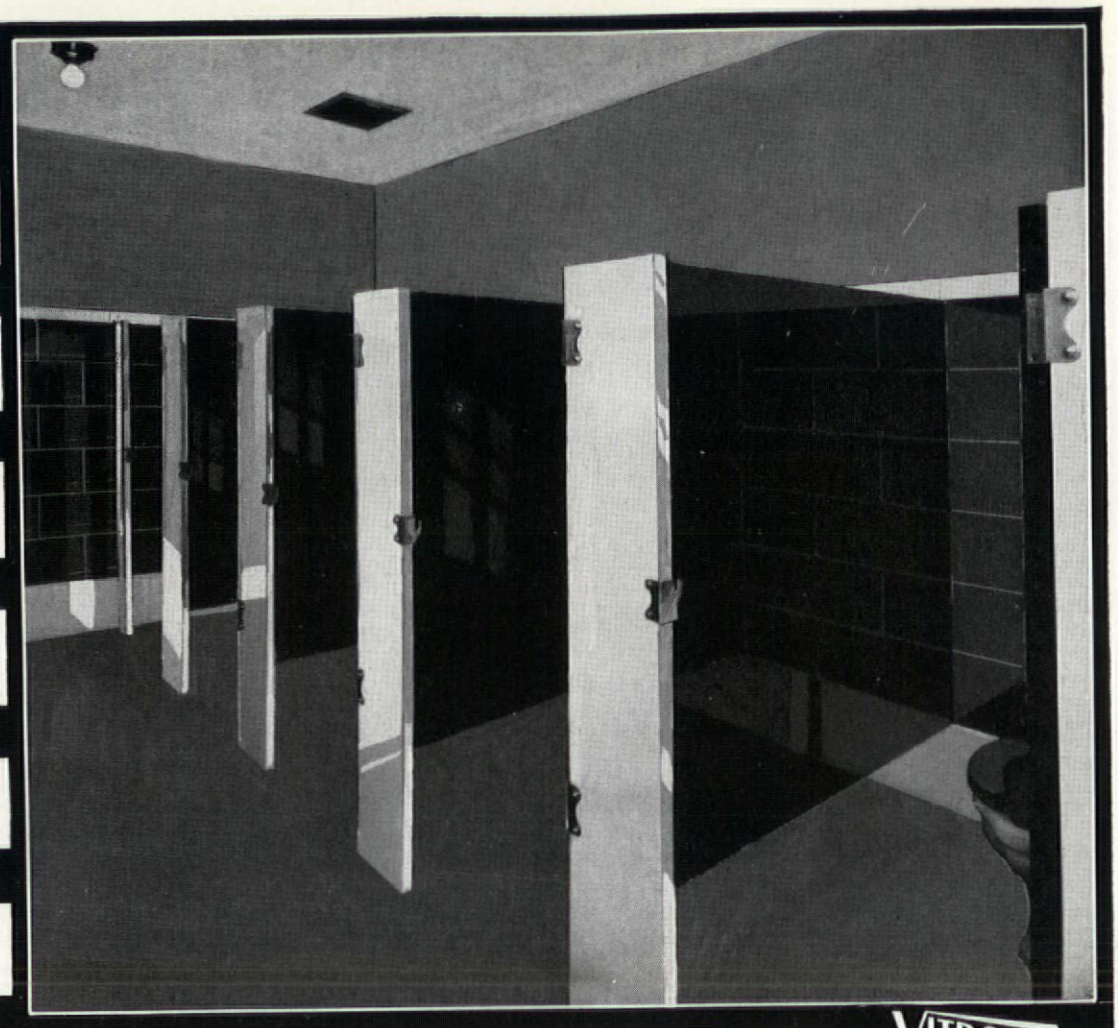
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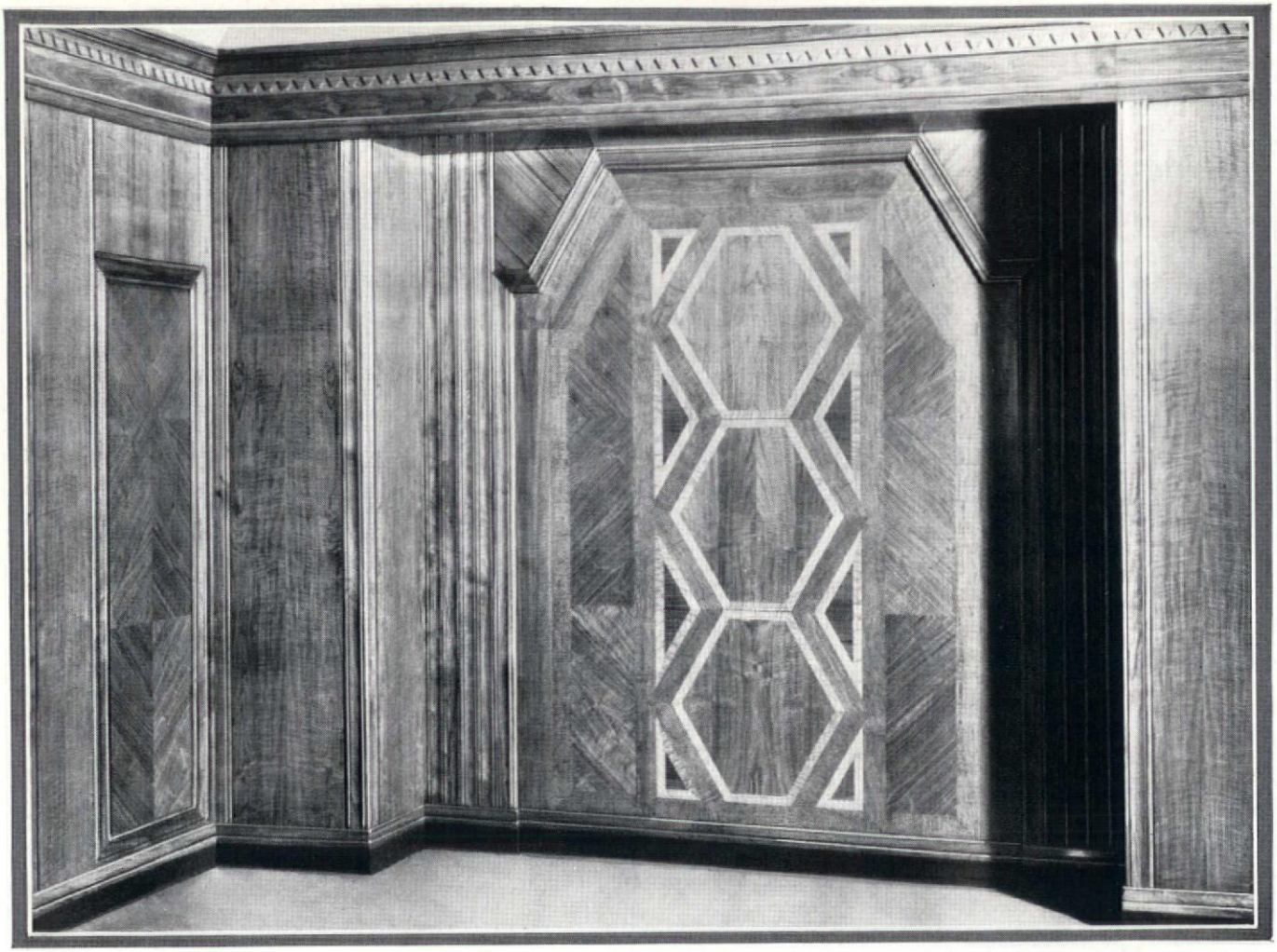
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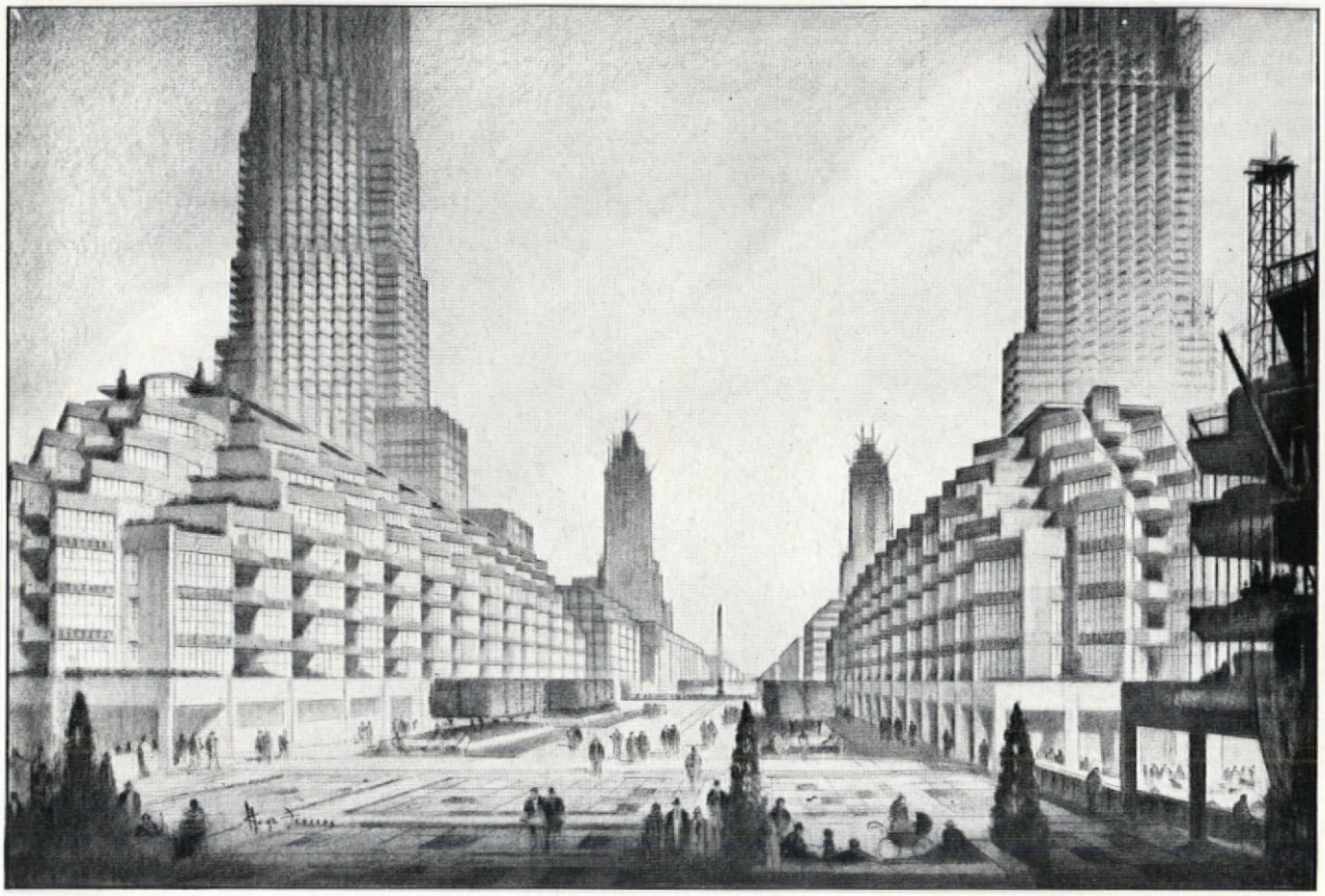
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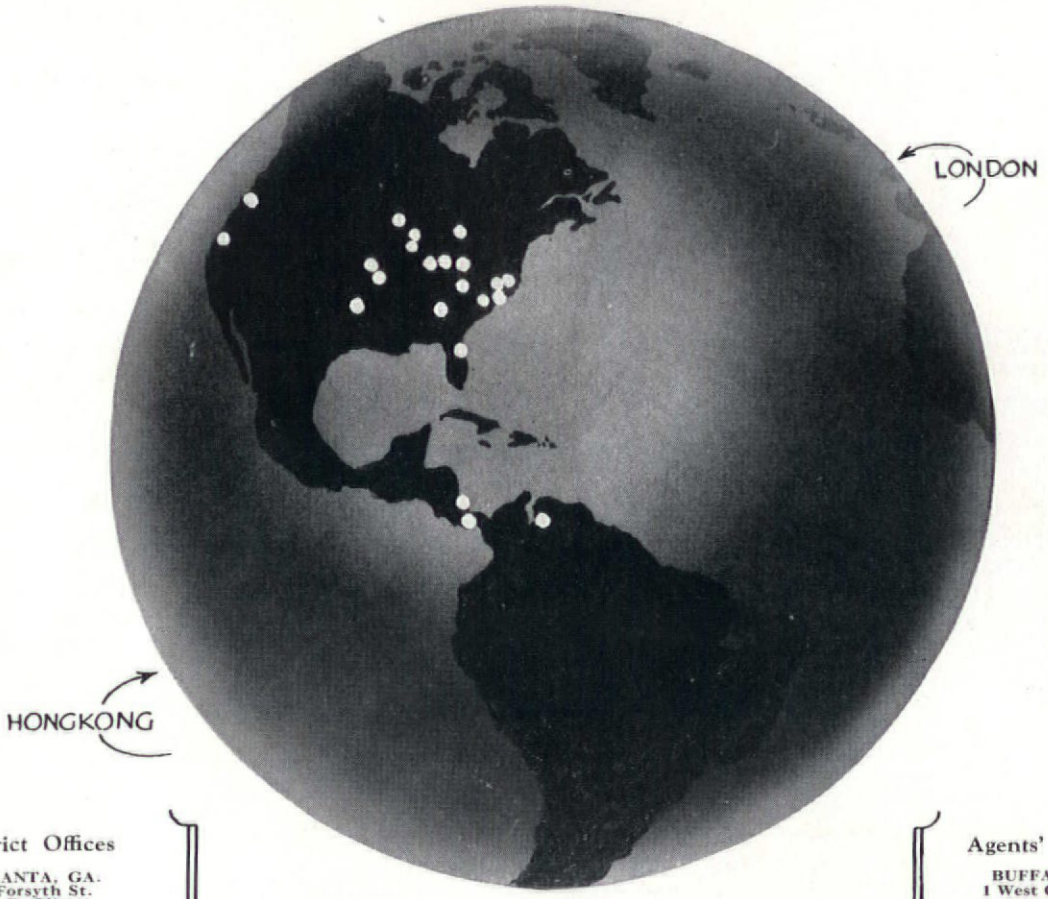
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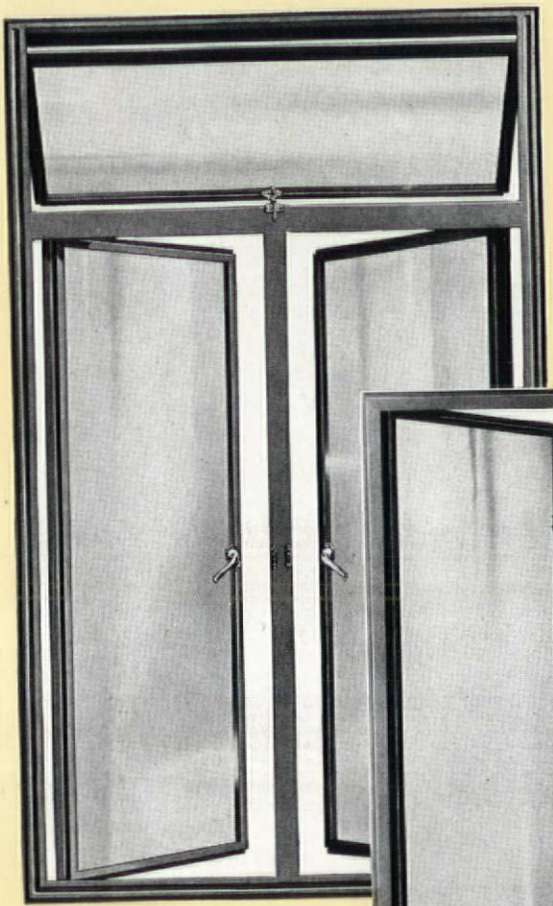
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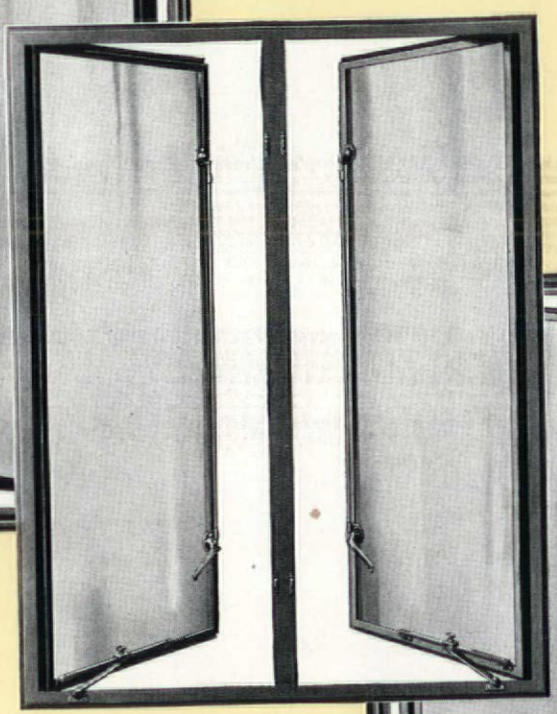
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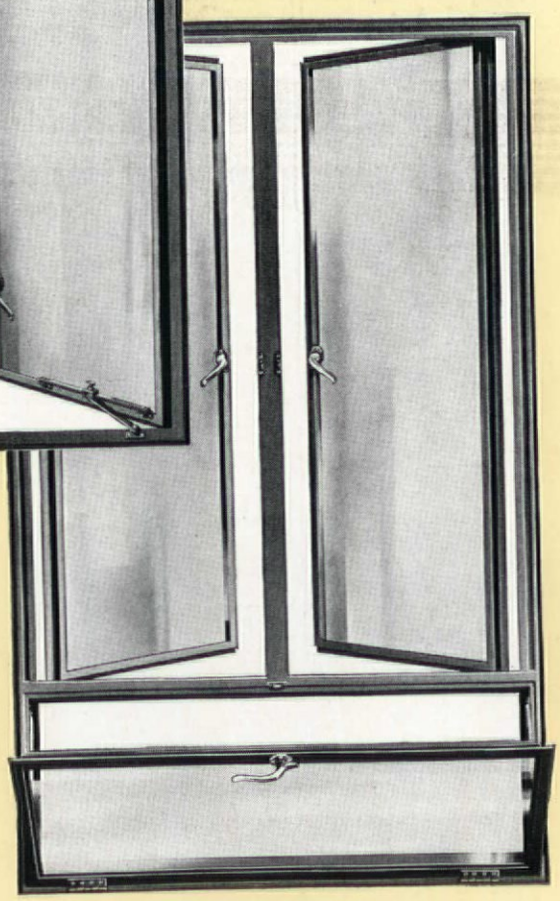
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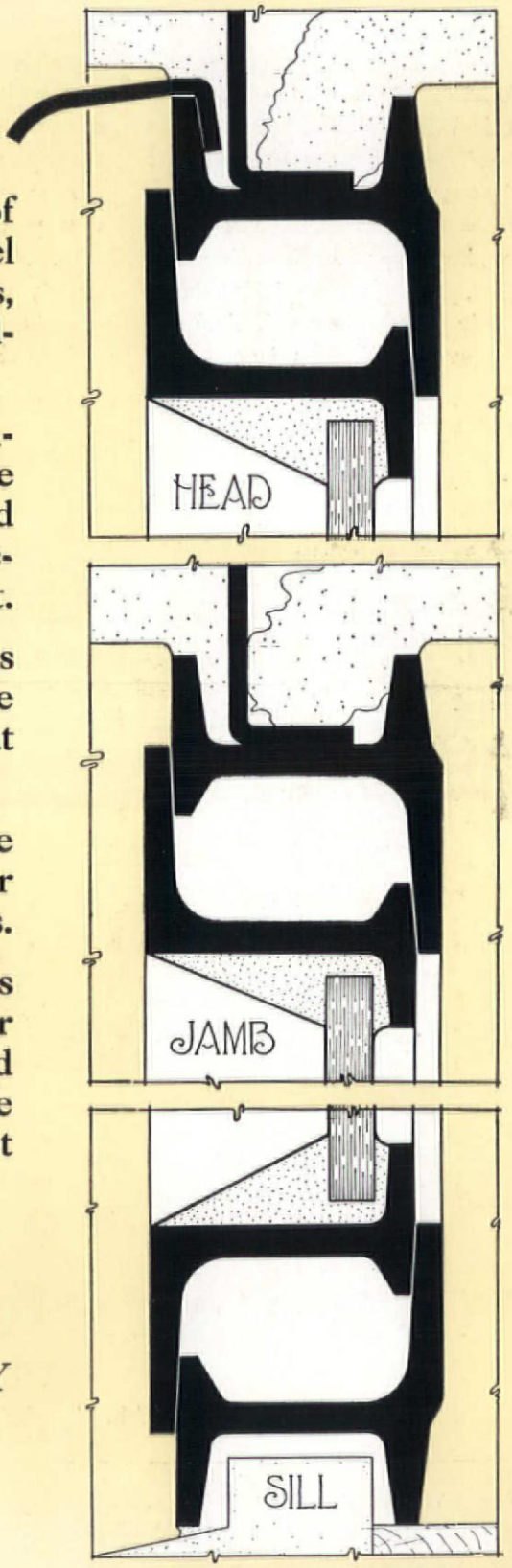
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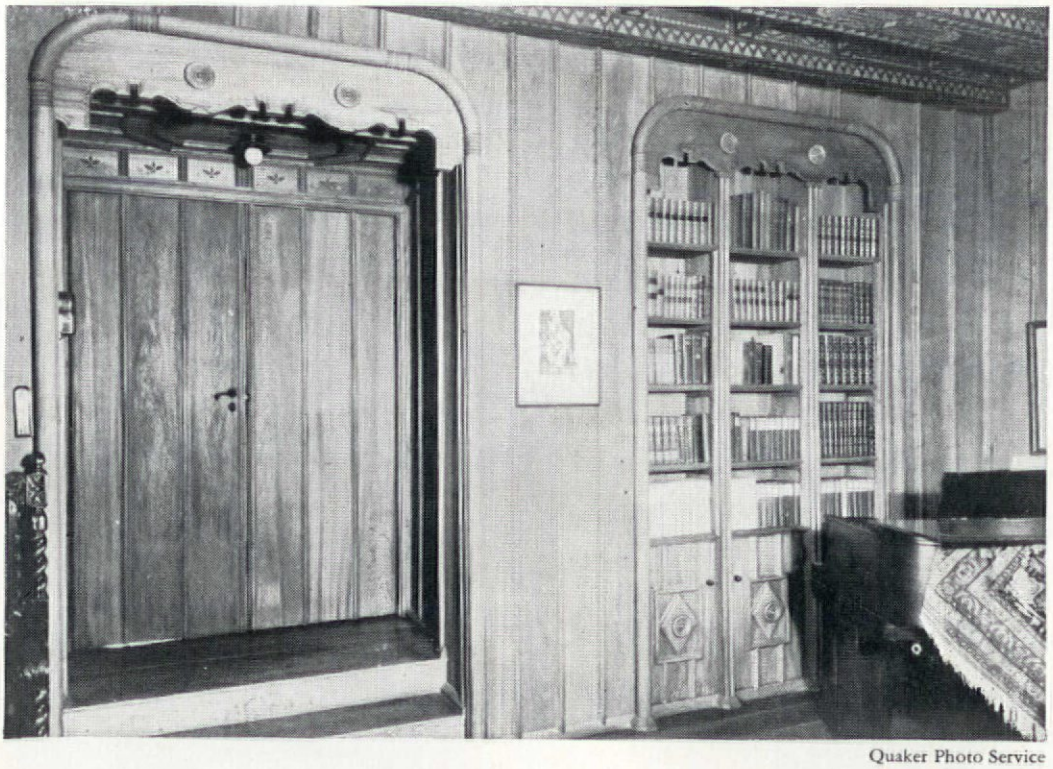
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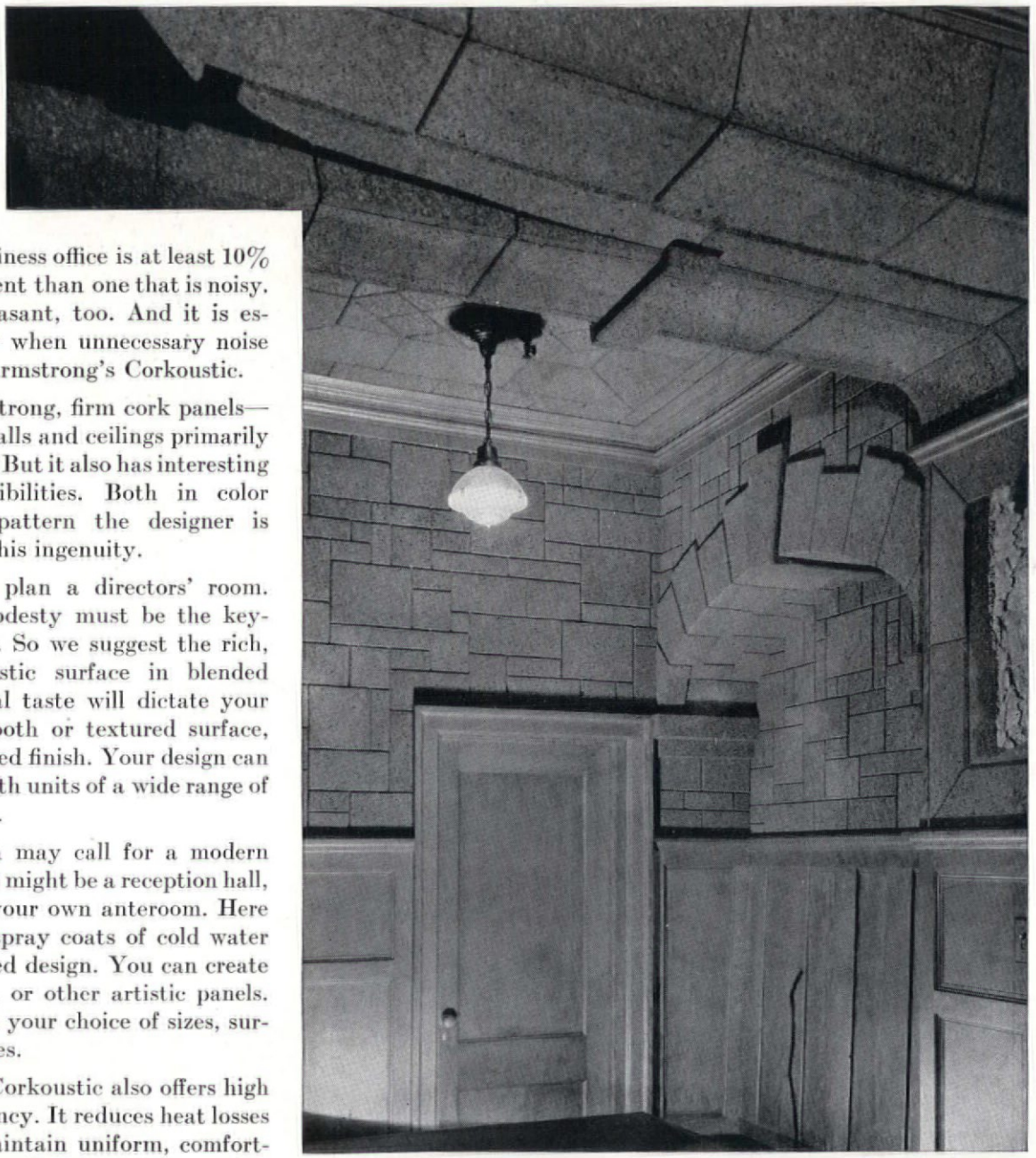
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Corkoustic can be easily applied direct to walls and ceilings to harmonize with the decorative style of any business office.

Armstrong's
CORKOUSTIC

Armstrong's (A) Product

Sound Quieting and Acoustical Treatment for all buildings







ALL the individual character of the architect's design, no matter how rhythmic the flow or modern the conception, can be faithfully reproduced in terra cotta. For symbolic figures and other forms of enrichment expressing the most cherished ideals of the American School, terra cotta is an exceptionally sympathetic material. The living, breathing spirit of the ornament is fully retained, as approved in the original model. Each unit, either in white or in full color, can be repeated without the slightest loss of feeling. Every detail is true to the creative impulse which transformed it from a lump of clay into a thing of lasting beauty.

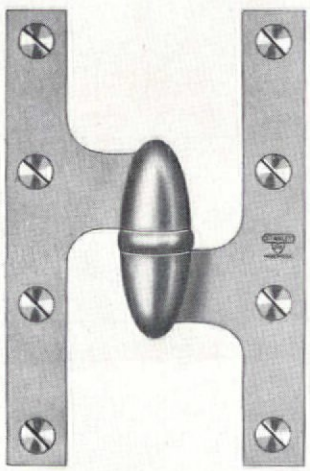
Entrance detail is in NORTHWESTERN TERRA COTTA Color, Light Brown Mottled. School of St. Thomas the Apostle, Chicago. Architects: Shattuck & Layer.

THE NORTHWESTERN TERRA COTTA COMPANY

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STANLEY
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STANLEY BALL BEARING HINGES

PERMANENCY

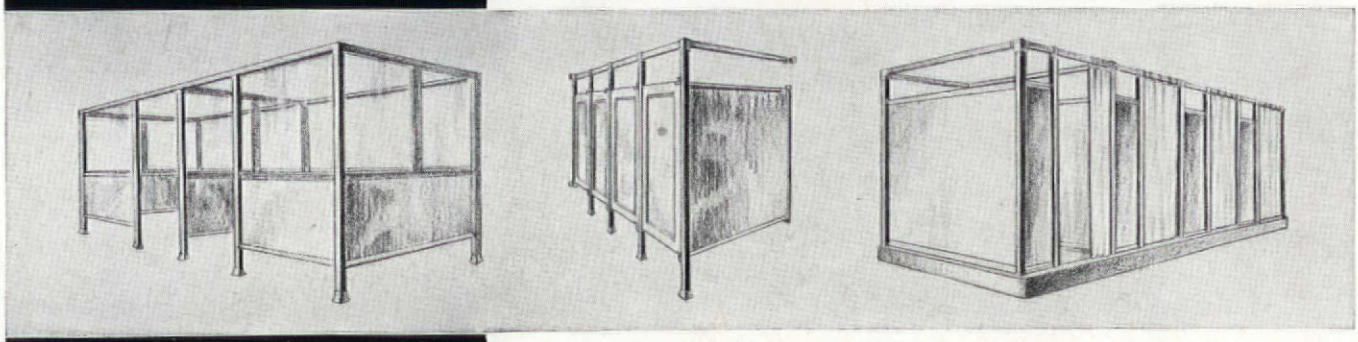
THE DOORS of the Cook County Criminal Court Building swing on Stanley Ball Bearing Paumelles. This is but another way of saying that the doors are equipped to assure smooth, trouble-free operation for the life of the building.

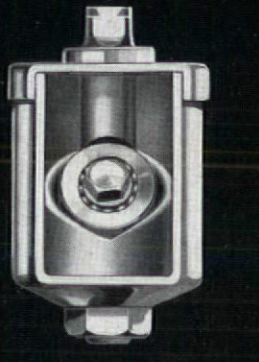
Eric E. Hall, Cook County Architect, by his specifications of Stanley Ball Bearing Paumelles, has saved the occupants of this building from the annoyance of hinges that squeak or doors that sag and bind.

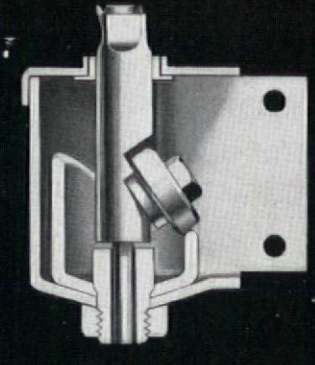
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WEISTEEL Compartments are equipped with Weis specially designed hardware parts and the WEIS Universal Gravity Hinge assembly. This hardware is the result of long experience and untiring development.

Notice the cross section of the hinge reproduced at the left. It is completely enclosed and fool-proof. Due to its ingenious design it provides, at all times during operation, geometrical continuity of contact between the roller and its race.

This is but one instance of the thorough going way in which WEIS designers and builders have functioned to provide the utmost in service and satisfaction in toilet compartments.

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ELKHART, INDIANA

You will find complete catalog in Sweet's 1930 edition, following page B-2388. Turn to it now.

NATCO *FRITTED GLAZE* VITRITILE NOW OFFERS A NEW MEDIUM OF EXPRESSION TO ARCHITECTS



3510-L

FRITTED GLAZE-A PLEDGE OF PERMANENCE

NEW fields of color composition, color harmony, are open with the advent of Natco Fritted Glaze Vitritile. The comprehensive line of structural units, suitable for interior or exterior walls and partitions, are painted with flame into beautiful luminous matt whites, striking blacks, and seven delightful and unique mottled effects, ranging through cream tans and cream browns.

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The Natco Fritted Glaze process, scientifically developed, is a pledge of permanence. The glaze is as permanent as that on the finest English Glazed Brick—the standard of excellence in materials of this type.

SEVEN MOTTLED SHADES

8530-L



NATCO *FRITTED GLAZE* VITRITILE

OPENS NEW FIELDS OF COLOR COMPOSITION AND HARMONY

8530-S



8515-L

NATCO FRITTED GLAZE represents the successful culmination of a determined attempt to produce a glaze so permanent—so impervious—so immune to the destructive agencies of time, the elements, chemical attack, staining, checking, and crazing—that it will easily meet the most exacting requirements. The fritted glaze process is the most effective method science has devised of holding, crawling, peeling, blistering, cracking and pinholing to a miscroscopic minimum.

Tests and experiments early disclosed that the ordinary processes of raw mixing, spraying, and kiln-burning which are in common use were powerless to attain these ideals. Only by the scientific fritted glaze process could they be realized.

Natco's frit is made of a number of various compounds, which are mixed, melted at 2300°, chilled and then ground to an impalpable powder. This powder represents a **new** and homogeneous compound, which melts at a much lower temperature. The successive coats of glaze material (sometimes as many as 7) are applied to the tile on a patented "G Mottling" machine, developed by a ceramic expert. This machine does its

SEVEN MOTTLED EFFECTS

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8520-S

NATCO *FRITTED GLAZE* VITRITILE
IS FURNISHED IN A COMPLETE
VARIETY OF SHAPES AND SIZES



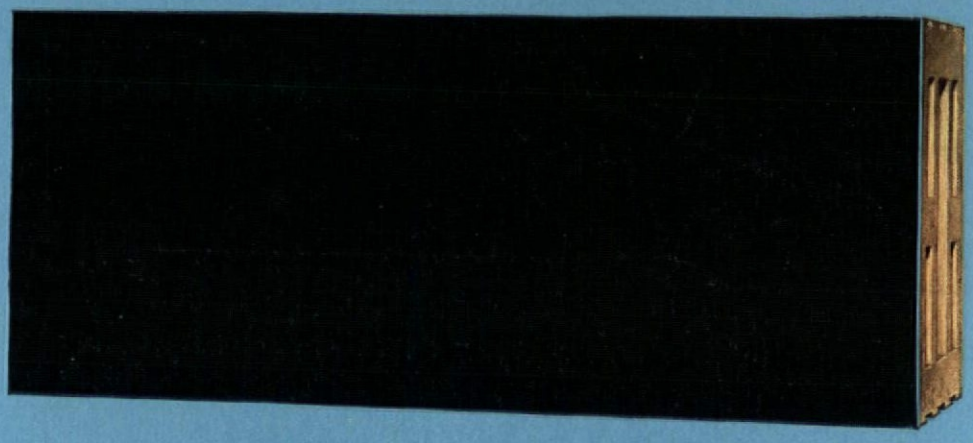
8535-L

work with absolute precision, substituting for the uncertainties of makeshift methods unvarying excellence of results. When the tile is kiln-burned, the frit causes the glaze to mature at a lower temperature; form a more intimate bond with the tile; give—because the various elements have been pre-melted, instead of merely fused, together—more uniform results; and yield a silica glaze equivalent to that on the finest English glazed brick—the accepted standard of excellence.

Colors are prepared in the same painstaking, scientific way. Instead of merely mixing a dye-powder with the glaze, Natco utilizes **calcined** colors; the various compounds required to produce the desired shade are blended, burned, wet-ground and the resulting powder screened, before it is added to the glaze. Color variation is thus reduced to a minimum.

The added care needed, the added expense, of the scientific Natco Fritted Glaze process is abundantly justified in the increased service, the assured satisfaction, the well-founded confidence that Natco's product offers to the user. Fritted glaze is a triumph of the ceramic art, a pledge of permanence to you.

In MATT FINISH BLACK AND WHITE



BLACK



WHITE

Natco Fritted Glaze Vitritile

For Permanent Walls of Enduring Beauty

EXTERIOR USE

THE calcined colors and fritted glazing of Natco Fritted Glaze Vitritile are prepared by a scientific process, and then are **fired** in, making them immune to acids, to alkalis, to the attack of the elements. The most striking effects may be obtained through this material and the effect will endure year after year with no decrease in attractiveness

INTERIOR USE

Beautiful, colorful finishes, hitherto obtainable only through costly decorating, now can be built into the wall. Instead of being faced with the necessity for frequent redecoration, the owner has a wall finish that will last as long as the wall itself. Dirt will not harm it, acids will not affect it. The glass hard fritted glaze repels dirt, is easily cleaned and kept clean.

Coming!

NATCO VITRIBRIK

The architects' cry for a new brick unit will soon be answered. Natco Vitribrik, shortly to be introduced, will offer a brick twice the height of the present standard. Its face will be finished in a beautiful and permanent salt glaze, which resists all agencies of destruction. Watch for the announcement, soon to come.

NATCO

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Should the description be changed?

A roof of Sheldon's Slate has, rightly, been called "the roof of eternal beauty."

Time, however, not only fails to deteriorate this eternal stone, but its caresses cause it to grow in loveliness. Even short periods of time mark an enhancement in beauty that can not escape attention.

A case in point is the First Methodist Church of La Porte, Indiana, a structure of Indiana Lime Stone all around, containing forty-eight rooms and costing $350,000, admired alike by citizens and visitors.

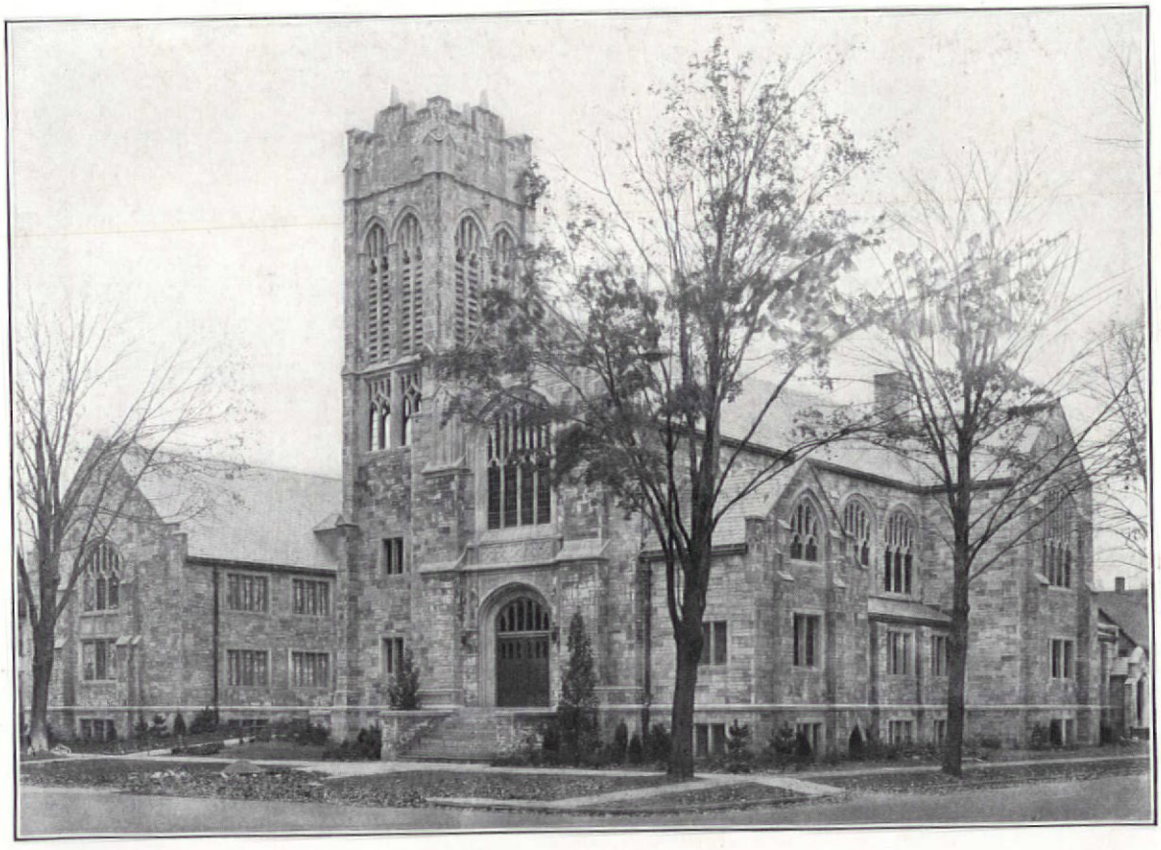
It is crowned with a roof of Sheldon's Semi-Weathering Green and Gray Slate* (shown in colors in Sweet's) and in a letter that lies before us Mr. George W. Allen, of George W. Allen and Sons, the Architects, says, significantly:

"That roof was put on in 1928, and I wish you could see it now. Time and the weather have made it so much more soft and beautiful in color!"

A common experience, which has led to the suggestion that a Sheldon Slate Roof would be better described as "the roof of eternally *increasing* beauty."

Haven't you, on the boards or contemplated, a project good enough for such a roof? If so, permit us to help you to develop one that will be a credit to you, an everlasting joy and profitable investment to the owners, and eternally increasing in beauty to all who observe it.

*Laid by Frank Laidlaw, Elkhart, Indiana

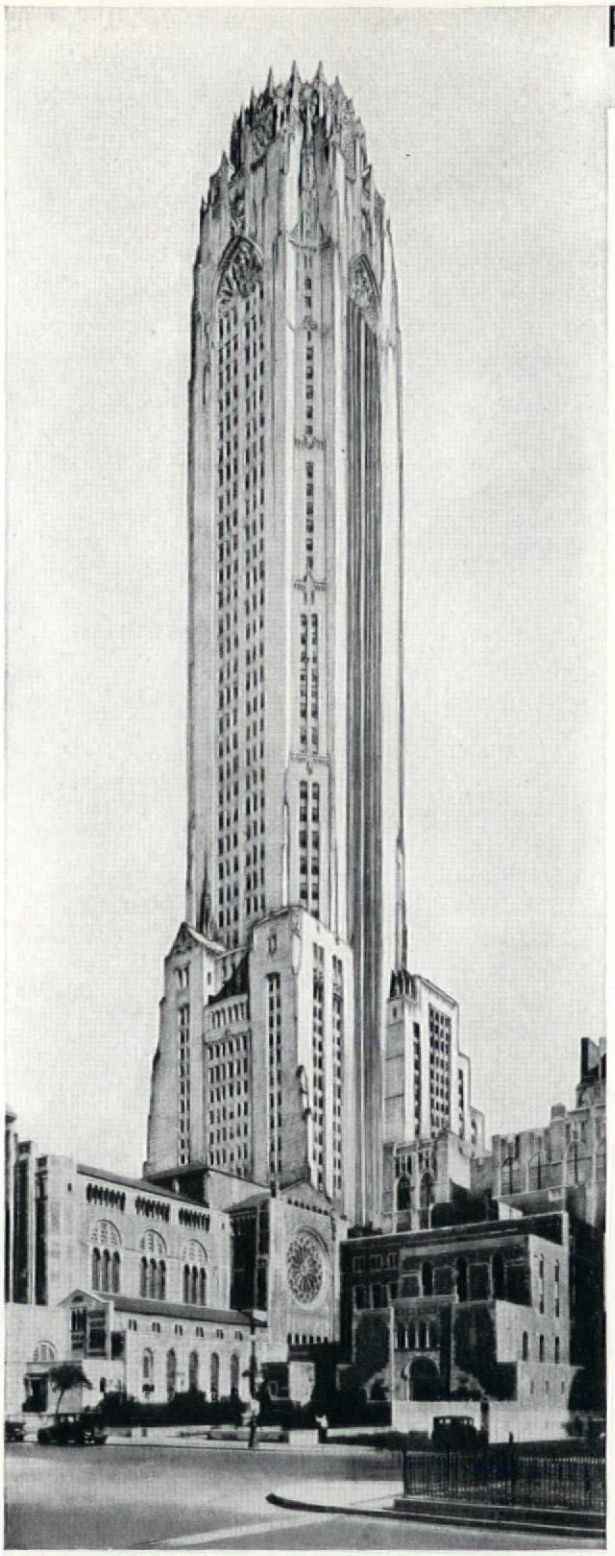


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GENERAL OFFICES · GRANVILLE · N.Y.

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ARCHITECTS: CROSS & CROSS

THIS MODERN 55-story office structure at 570 Lexington Avenue now being erected by A. L. Hartridge Company for the Bartholomew Building Corporation will be equipped throughout with metal doors, trim and

Elevator Entrances by
DAHLSTROM

THE DAHLSTROM METALLIC DOOR COMPANY, JAMESTOWN, NEW YORK
WITH OFFICES AND REPRESENTATIVES IN PRINCIPAL CITIES

A MESSAGE TO ARCHITECTS FROM THE UNITED STATES GYPSUM COMPANY



Acoustone Ceiling, Trust Department, Northern Trust Company, Chicago. Frost & Henderson, Chicago, Architects.

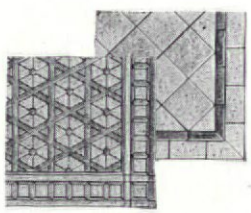
A Solution to the Difficult Problems in Architectural Acoustics

WHILE the problems in Architectural Acoustics have always been perplexing, the demand for comfortable noise levels has grown so rapidly that many architects realize, more than in the past, the need for an organization which can take full responsibility for the acoustical phases of its assignments.

Through the creation of many types of acoustical materials and methods of application and through the development of a competent staff of experts—as well as through the maintenance of skilful installation crews—the United States Gypsum Company has endeavored to make an exact science of what were once vague theories and unreliable opinions.

The result is that the United States Gypsum Company is well prepared to counsel with you on all acoustical problems. We are in a position impartially to prescribe the type of material best suited to the job, to complete the installation in accordance with the specifications and to *assure the specified results.*

For jobs requiring reduction or complete elimination in the transmission of noise from one room to another, the USG System of Sound Insulation and USG Insulative Doors are employed. For the absorption of noise within the room in which it is created and for the correction of acoustical conditions in auditoriums, churches, theatres, and other public buildings, Sabinite Acoustical Plaster, or Acoustone, the USG Acoustical Tile, is usually prescribed.



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Acoustone is a scientific sound-absorbent—light in weight and possessing a texture that resembles travertine. It is easily and quickly installed on new or old walls and ceilings without interruption to business. Supplied in a wide variety of shades, shapes and sizes, it readily lends itself to any architectural or decorative scheme.

Samples of Acoustone, a description of its uses as well as an explanation of the cooperation which is available to you on any problem in Architectural Acoustics, will be sent upon request. Please address the United States Gypsum Company, Dept. 43N 300 West Adams St., Chicago.

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Cleveland Terminal Tower

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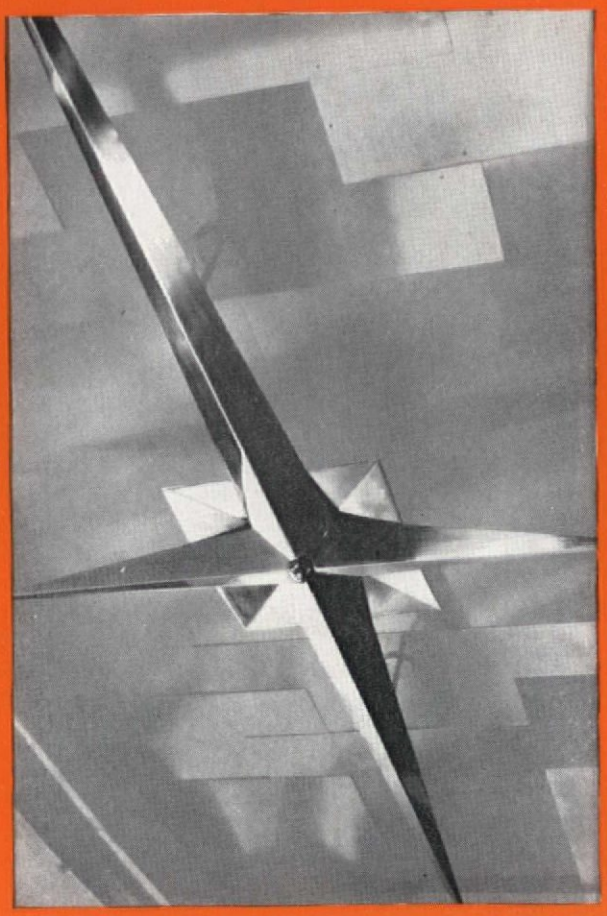
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Dix Hills, L. I.

Otto R. Koechl
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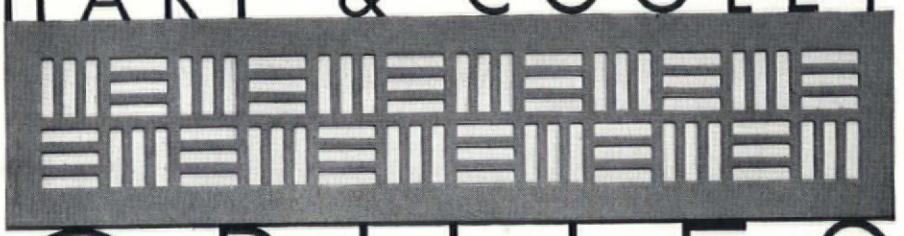
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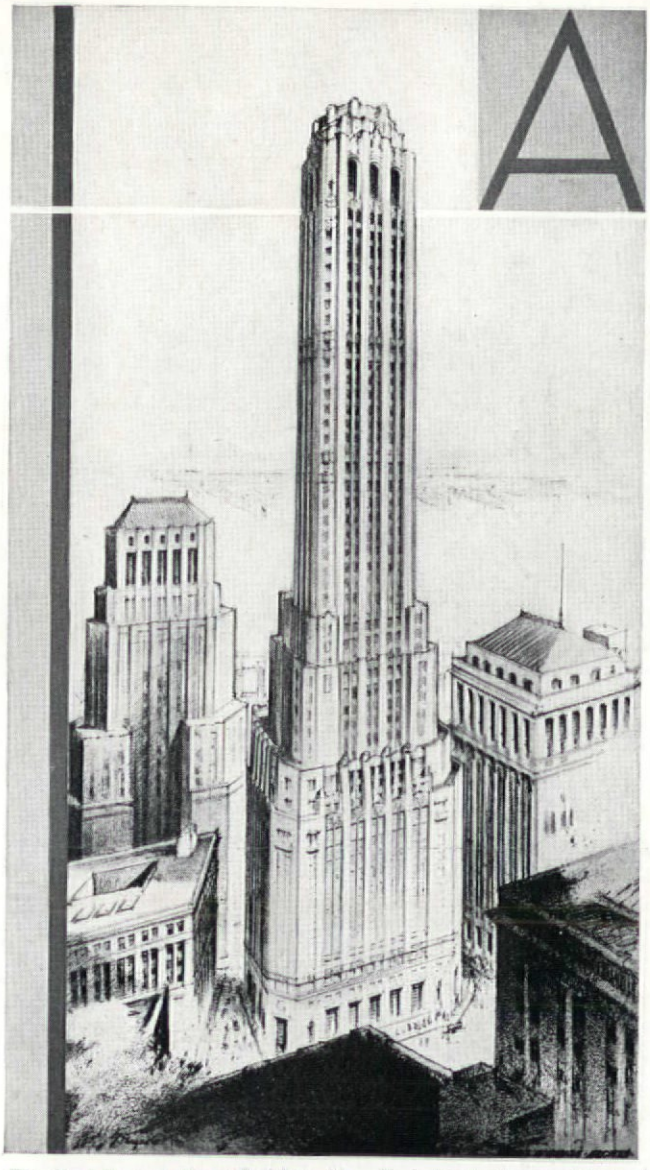


HIGHTON
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GRILLES

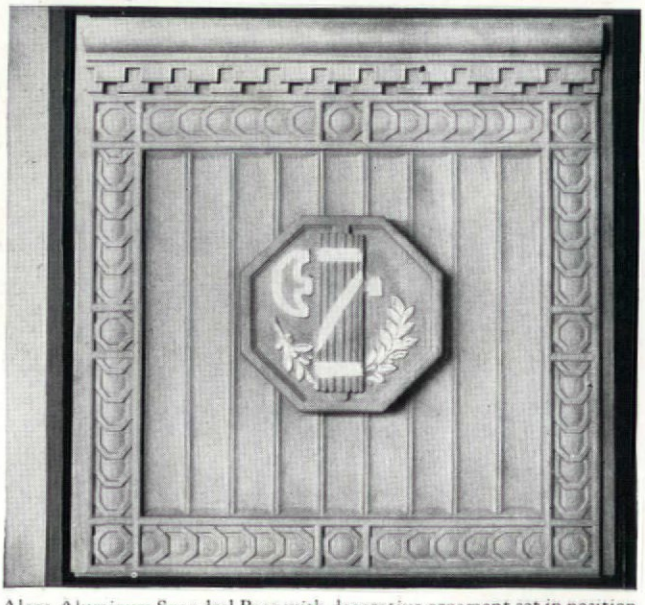
Above is shown the illustration of the Merchandise Mart, Chicago. Architects: Graham, Anderson, Probst & White, Chicago. General Contractors: John Griffiths Sons Co. Heating Contractors: Robert Gordon, Inc., Chicago. Highton, Hart & Cooley Grilles in design No. 589 (shown above) were selected for this internationally famous building.

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Alcoa Aluminum Spandrel Base with decorative ornament set in position over vent opening. Spandrel 4 ft. 5½ in. x 4 ft. 11¾ in. Weighs 116 lbs.

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ALCOA

Ornaments and Spandrels 300,000 lbs. at no extra cost, Farmers Trust Building, N.Y.C.

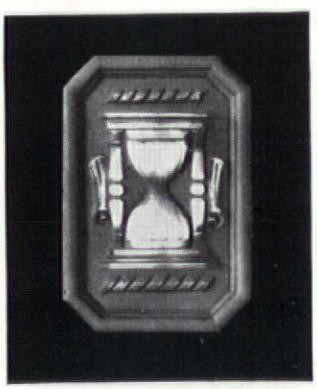
Alcoa Aluminum does not rust. It will not streak adjoining surfaces; never requires painting. Pleasing effects are obtained by deplating and high-lighting certain portions of the surface by polishing.

Our nearest office will gladly give you complete information on the many ways in which Alcoa Aluminum is being used as a building material. Let our representative advise with you on the use of Alcoa Aluminum for any specific architectural purpose you may have in mind. Address ALUMINUM COMPANY *of* AMERICA; 2467 Oliver Building, PITTSBURGH, PENNSYLVANIA.

Specifications of these Spandrels and Ornaments

"These Aluminum Spandrels and Ornaments shall be made of Alcoa No. 43 alloy, having a silicon content of 5%. The average tensile strength shall be 17,000 lbs. per sq. inch and the average elongation 5% in two inches. The weight shall not exceed .097 pounds per cubic inch. The surface shall be free from imperfections and in all respects equal to sample submitted."

4 of the 6 different Alcoa Aluminum Ornaments used on Spandrels in this Building



Alcoa Aluminum Spandrel Ornament—14 in. x 20⅜ in. Weighs 10 lbs.



Alcoa Aluminum Spandrel Ornament—19½ in. x 20 in.—9 in. across bottom. Weighs 10¾ lbs.



Alcoa Aluminum Spandrel Ornament—19½ in. x 20 in.—9 in. across bottom. Weighs 11 lbs.



Alcoa Aluminum Spandrel Ornament—21¾ in. x 21¾ in.—9 in. across bottom. Weighs 13 lbs.

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In no sense of the word is BI-FLAX a substitute plaster base. It is a combination of the finest plaster base . . . diamond mesh metal lath and the finest insulating material . . . FLAX-LI-NUM. A network of steel protects against plaster cracks and blemishes. A blanket of flax stops heat leakage.

Never before has there been such an ideal insulating plaster base . . . Never before have two such vital materials been offered in a single workable sheet.

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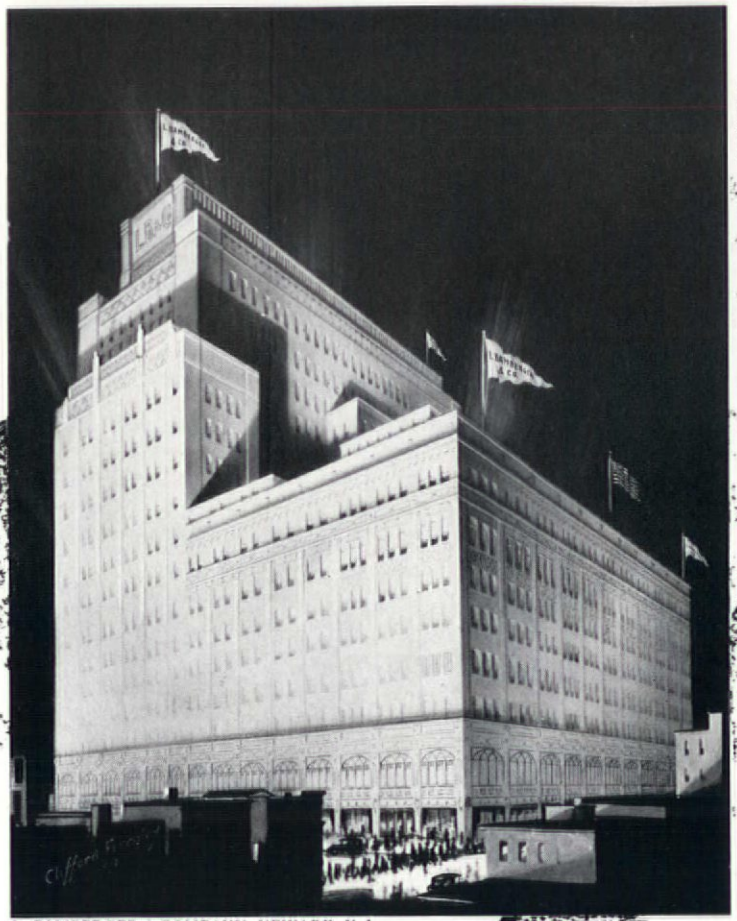
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Jarvis Hunt, Chicago, Architect; Taussig & Flesch, Chicago and New York, Fixture Architects; Barker Painting Company, Painting Contractors.



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Mr. Merton E. Granger, in accord with other leading architects of America, finds Rolscreens best suited for the screening of fine windows.

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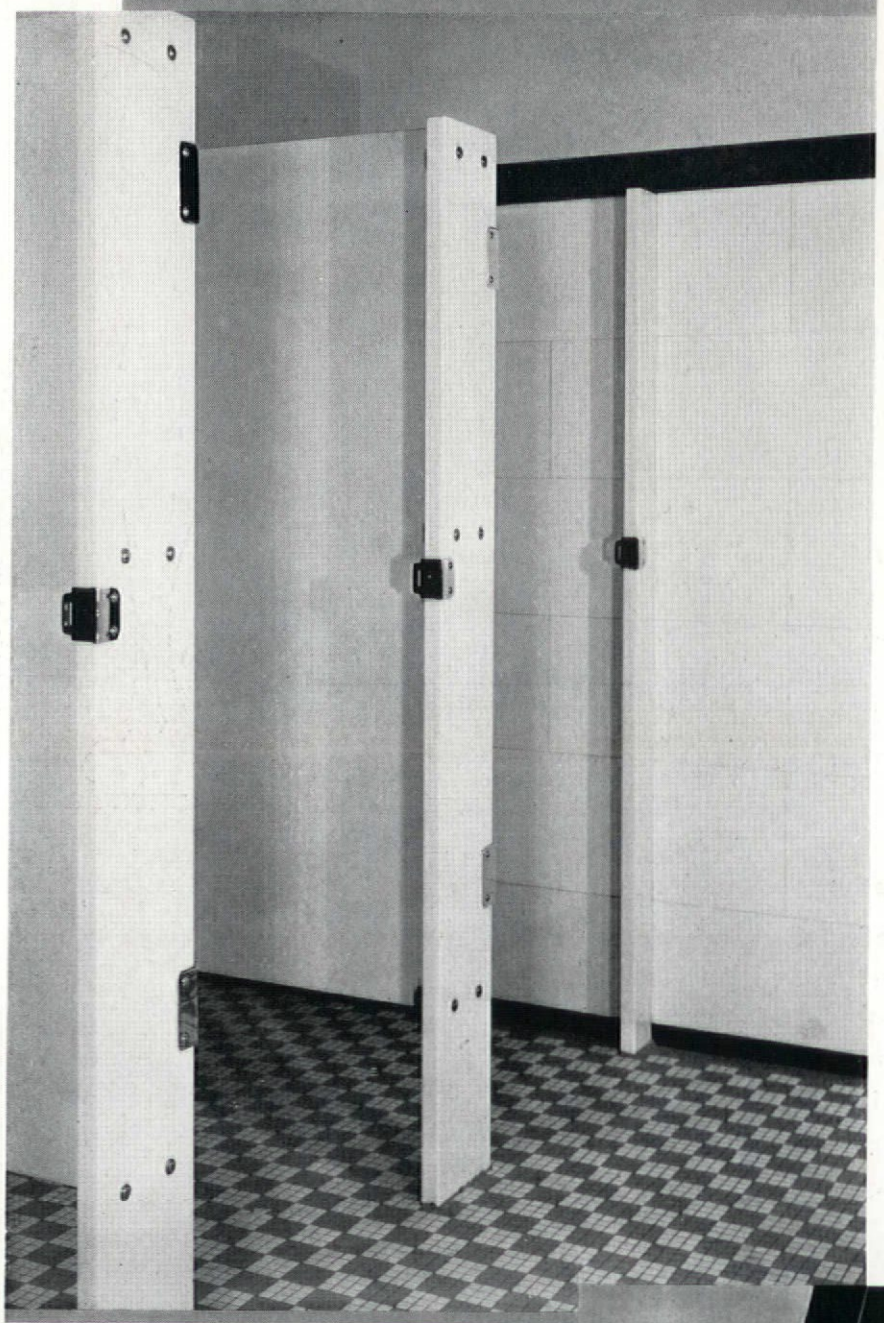
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SPANG
WELDED STEEL PIPE

Stiles and partitions of polished white Carrara, and walls of Frostex topped with bands of black Carrara. Lincoln Building, New York City.



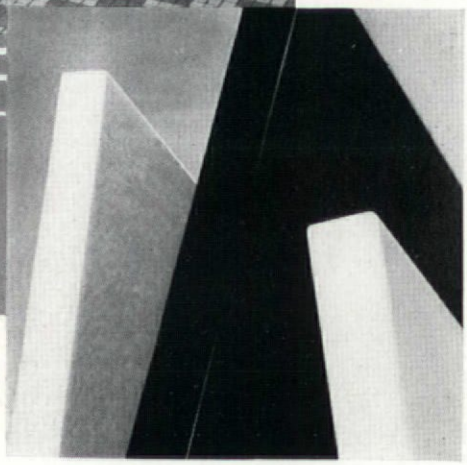
STRONG, DENSE-SURFACED, SANITARY— YET BEAUTIFUL, TOO!

IT is not by chance that so very many of the new, modern buildings are using Carrara Glass in washrooms and toilets—as well as for decorative purposes in other interiors. Here, in the Lincoln Building toilets, Carrara was chosen for its sturdy strength; for its hardness, which makes it impervious to water, chemicals, pencil marks; for its density, which guarantees it against absorption of dampness and odors; and for its beautiful polished surface, so easily kept clean and sanitary.

Carrara can be had in three styles —Black Carrara, White Carrara, and also Frostex, which is white with a slightly rippled surface. All of these types come in slabs of convenient and practical sizes. Carrara is handled and installed just like marble. Full information will be forwarded to you concerning Carrara—its qualities and uses—if you will write to the Pittsburgh Plate Glass Company, Carrara Department, Grant Building, Pittsburgh, Pa.

CARRARA

Modern Structural Glass



Polished White Carrara, Polished Black Carrara and ripple-surfaced Frostex.



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BATES SEAM-FACE GRANITE as quarried at Weymouth, Mass., near Plymouth, Mass., makes an ideal ashlar facing for fields of building walls. The ashlar has a wide color range, including buffs, greys, yellows, greens, light and dark browns, and is usually specified as "quarry run," or limited ranges may be selected by the architect. The thickness of the ashlar varies from four to eight inches; this variation gives a good bond so that anchors are not necessary. The horizontal and vertical joints should not be less than one-half inch, but better results are obtained with three-quarter or one inch joints. The ashlar is squared up for rise and length, with pitching tool, and is ready to set in the wall. Rises are on the inch from four inches to fourteen, limits changed if desired. Lengths are random, to be nearly twice the rise and more, averaging two to three times the rise. Longer stones can be obtained when required. Average thickness into the wall is six inches. The split-face granite is the same as the seam-face granite, excepting the surface color is of the natural granite, ranging from light brown to grey. Dimension stone is obtainable for steps, lintels, sills, archstones, jambs, etc. These pieces may be machined or rough hammer machined, or rough pointed by hand tools to remove projections.

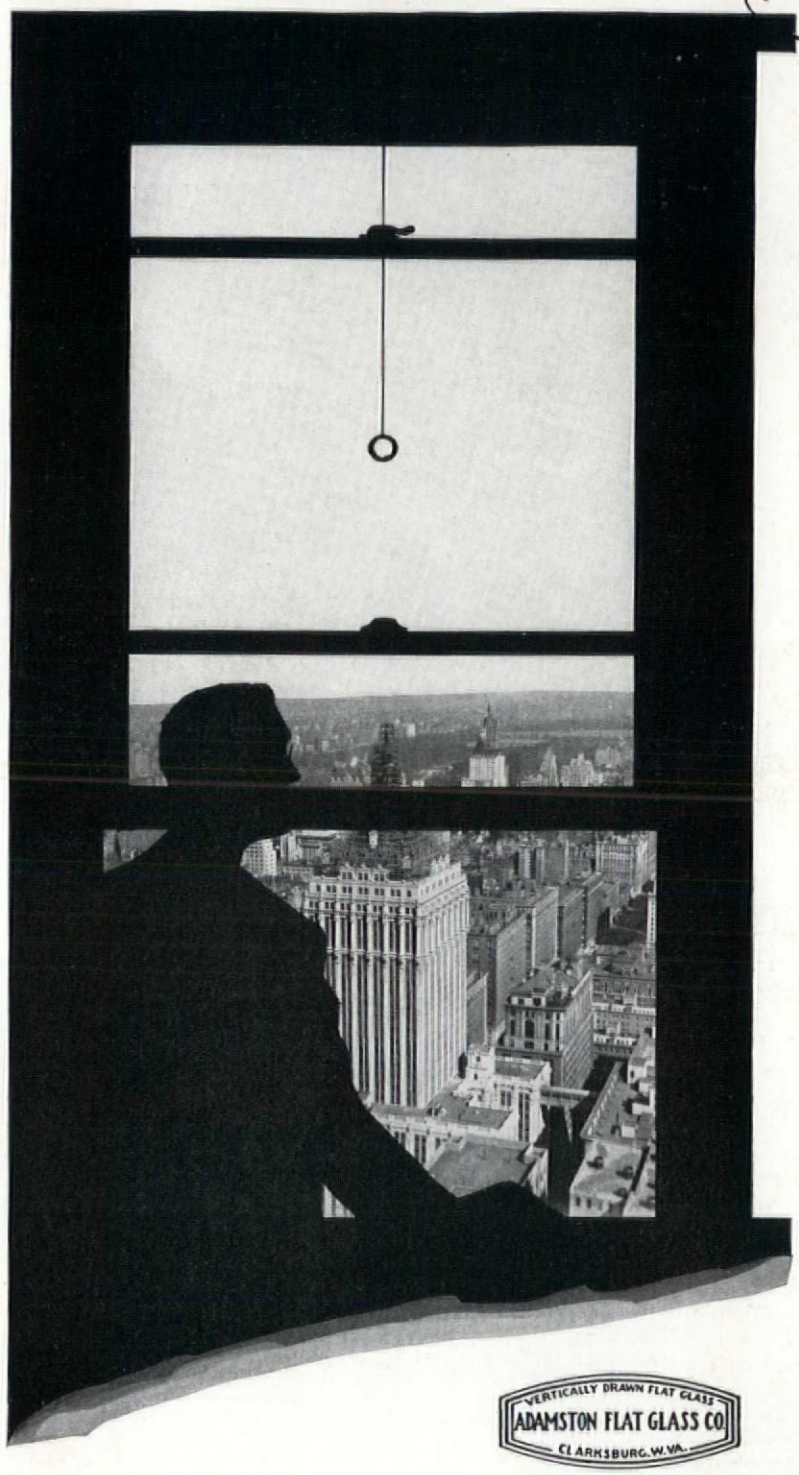
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From any angle

a vision as clear as through the open window



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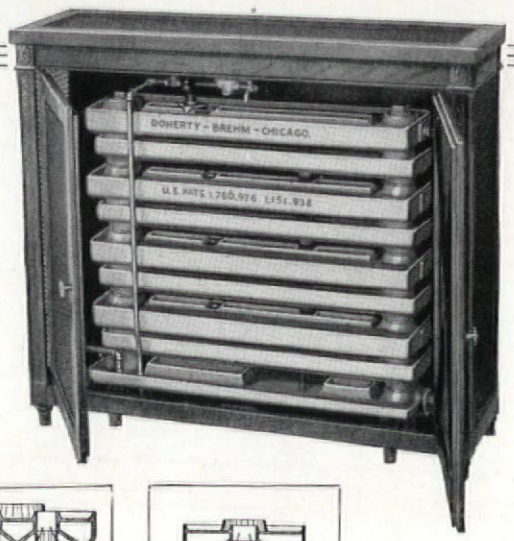
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FAMOUS OHIO FINISH

24 Gallons . . .

a full day's drink for *Thirsty Air*

supplied by this simple low-cost Humidifier



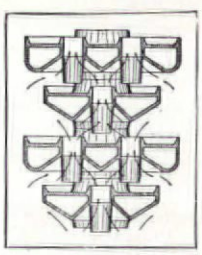
IF you knew of a Humidifier that really humidified. That was no makeshift pan or untidy absorbent wick. That supplied enough moisture for dry, thirsty, radiator-heated air . . . and automatically supplied just the right amount. That even a cottage builder could afford . . .

Wouldn't you write it into the specifications? Wouldn't you give your clients the health protection; the immunity from colds, chapped skins, ruined furniture, that it would bring?

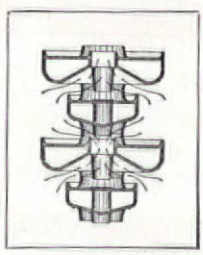
Here's such a humidifier . . . the Doherty-Brehm. It evaporates the full 24 gallons a day needed by average homes on coldest days, more or less as needed. As simple in operation as an ordinary radiator, it is installed in the steam, hot water, or vapor heating system just like an ordinary radiator. Getting its heat from the regular radiator system, it evaporates more water on cold days when the air is drier, because more heat is supplied to it; and less on mild days, when less added moisture is needed for correct humidity. Thus it is fully automatic.

There's no more to get out of order than in an ordinary radiator. No belts, fans, or motors; no noise, steam, or odor. One, centrally located, will humidify the whole house. And it acts as a radiator as well as a humidifier, actually supplying more heat than an ordinary radiator of the same radiating surface.

The illustrations and diagrams go far toward explaining it. But you'll be interested in full information. Let us send complete literature, specifications, and data. Or a representative to explain it fully.



Here is a diagram of sections and air circulation for hot water systems



Here is a diagram of sections of the Humidifier for steam or vapor

$150 to $225 f. o. b. factory, installation extra, in beautiful metal cabinet. Other models in period wood cabinets. Supplied also for recessing into wall. Types and sizes for any house heated by steam, hot water, or vapor. Water, fed in at the top, spreads out over the horizontal first section, the overflow going down and spreading over the second section, and so on until the last section is reached.

On easy payments if desired

The Doherty-Brehm Humidifier is sold through dependable heating and plumbing contractors; by **CRANE** branches under the ***Crane Budget Plan for 10% down, the balance monthly.*** You'll want to tell clients whose houses are already up about it, as well as specify it in the houses you are planning.

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333 North Michigan Avenue, Chicago

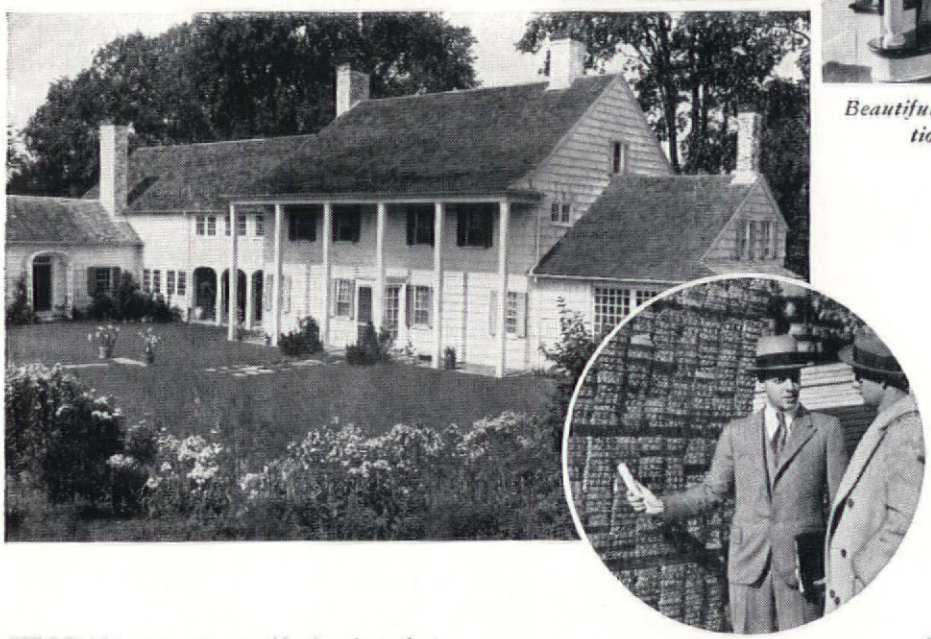
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Mail the coupon for a free copy of "Know the Lumber You Use." It contains detailed information about efficient uses of different grades and species of wood, the complete story of grade- and trade-marked lumber, and an explanation of Certified Shipments—a further guarantee of security for lumber buyers.

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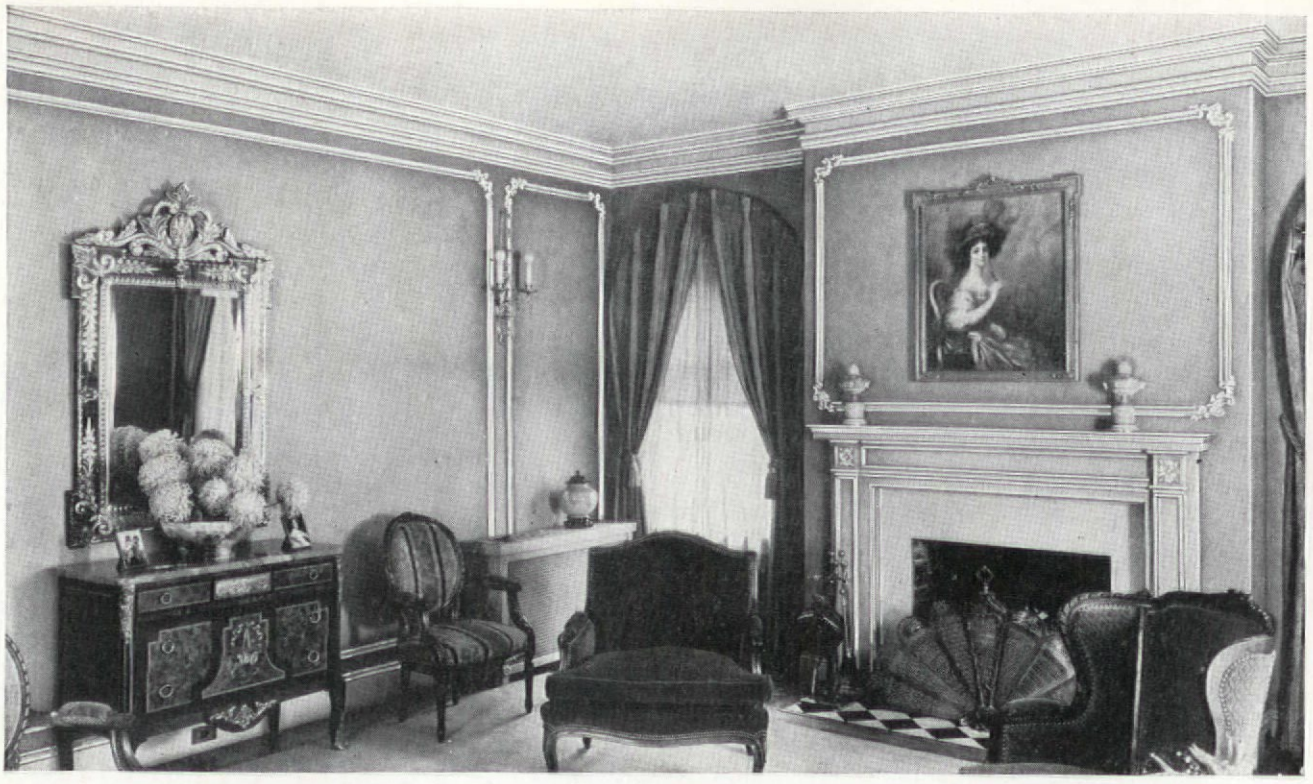
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For this fine mantle, the beautiful moldings and baseboards, E. E. Young, San Francisco architect, selected Port Orford Cedar. This wood is used throughout for interior trim. Residence of Mrs. G. Frisbee and Miss Nellie Turner.

This CREAM-WHITE CEDAR *is ideal* for all interior finish and trim

The success with which Pacific Coast architects are using Port Orford Cedar is impressing architects throughout the United States with the merits of this wood—both for stained and enameled interiors.

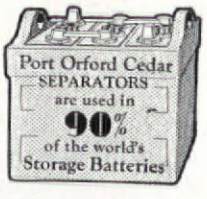
Its exceptionally smooth surface takes enamel readily and with a beautiful porcelain-like luster. Holds it for years. No trace of grain shows through. No unusual preparatory priming is necessary.

Its cream-white color readily assumes true, even, warm stains. The wood is light and pliable and easily worked. Holds nails with unusual tenacity. Never checks or splinters. Doesn't warp or twist. Contains no knots, pitch, rosin. Homogeneous of texture, it machines easily to special designs.

Port Orford Cedar resists acid and soil decay, and is widely used for garden furniture, porch columns, entrances, boat and aircraft building; bulkheading, decking, tunnel lining, loading platforms. Non-warping, this wood is ideal for Venetian Blinds, built-ins, etc.

Your local lumber dealer and millwork house has Port Orford Cedar lumber and plywood, or can obtain all grades and sizes promptly.

You'll find our illustrated literature interesting and valuable. The coupon brings it posthaste.



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The Aristocrat of Woods

PORT ORFORD CEDAR PRODUCTS COMPANY
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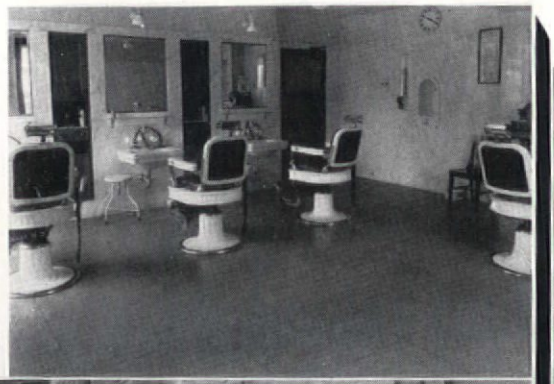
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Please send me free your book "Port Orford Cedar—Its Properties and Uses"; also "Beautiful Interiors with Port Orford Cedar" by Wade Pipes, A.I.A.

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Walking Safety for Hurrying Crowds—

Even in those places where liquids are spilled







Architect: Horace Trumbauer, Philadelphia

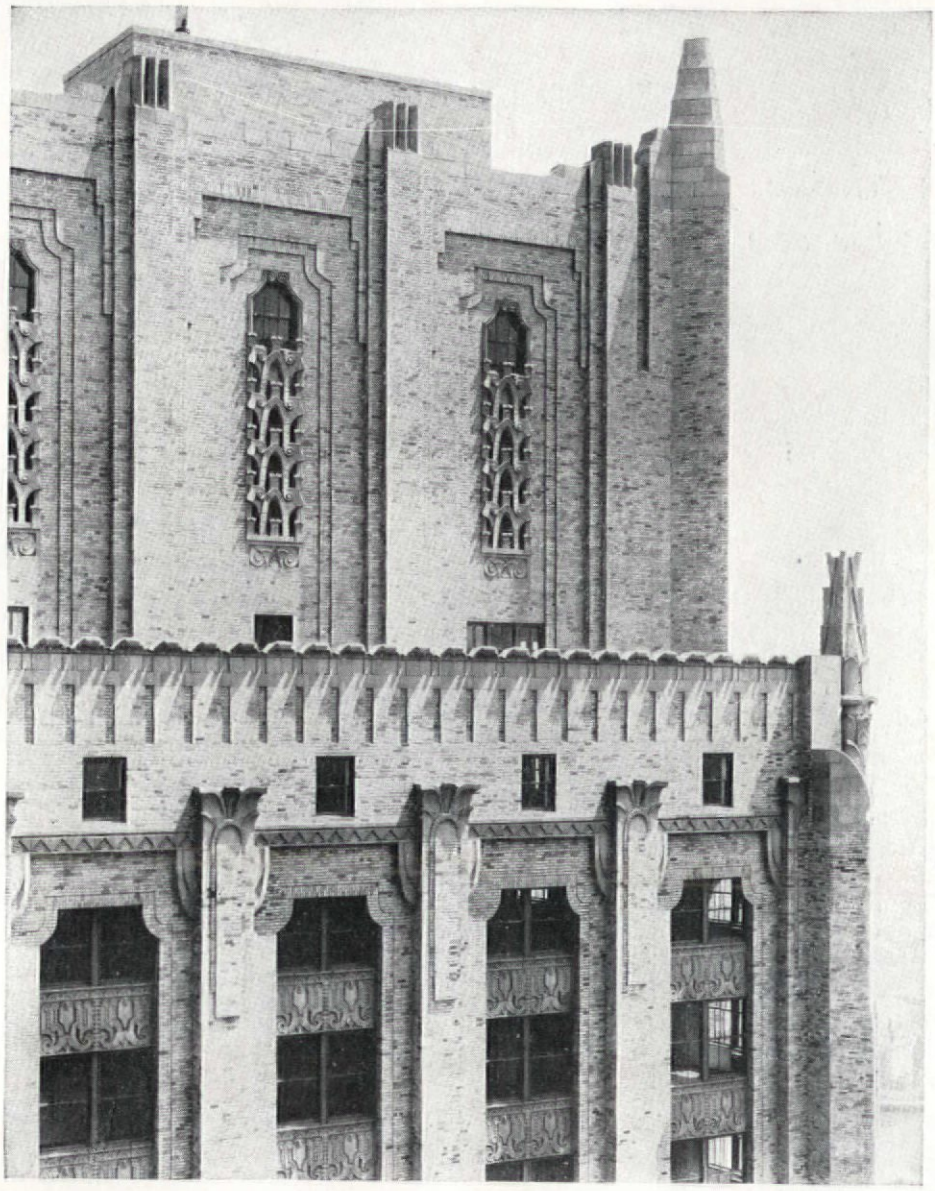
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Alundum Tiles, Treads & Aggregates

SAFETY for hurrying, rushing crowds has been the keynote in this North Broad Street (Philadelphia) Station of the Reading Railroad. Alundum Aggregate in the terrazzo of the main waiting room, the barber shop, the lunch and dining rooms, the lavatories and the public telephone and telegraph room assures a permanently non-slip floor—even in those areas where liquids are frequently spilled.

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Frank Grad . . . . Architect
A. E. Lefcourt . . . . Builder



IN erecting one of the Lefcourt landmarks in Newark, the architect used a material calculated to facilitate the problem of the design of a building with four equally important fronts . . . Federal Seaboard terra cotta of a harmonious buff color was extensively used to obtain the desired result.

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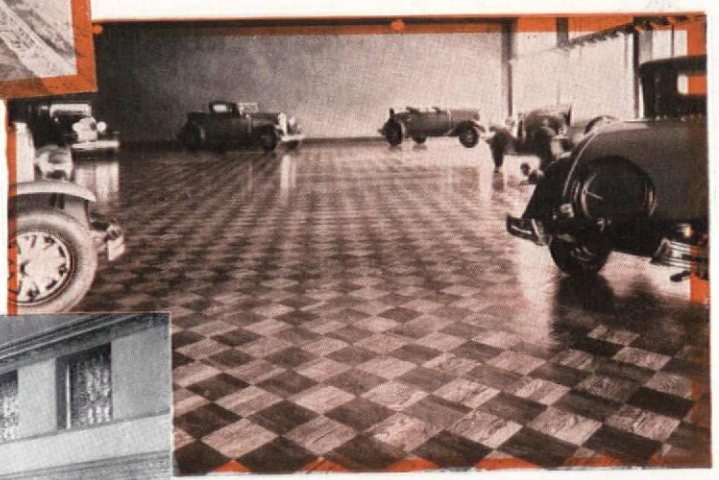
6¾" oak floor block

This unit wood floor block, *CELLized, now provides a design floor both beautiful and durable. Unexcelled for offices, hotels, ball-rooms, clubs, display rooms, public buildings, hundreds of uses for which a design wood floor has hitherto been too expensive.

Style, permanence, comfort under foot, lowest upkeep cost — all combined in a floor of unique beauty. Each block is a complete unit laid in EVERBOND, a plastic cement, without nails, directly over concrete or wood subfloor. The floor is sound deadening as EVERBOND is a non-vibrating medium. Each block is *CELL*ized* to reduce the tendency toward distortion. Protects against decay. Blocks are available in oak, beech, maple, red gum, walnut, and Philippine mahogany, in squares and rectangles, several sizes.



Architects may now specify a floor, whose application is handled by trained specialists, and guaranteed by us, when laid by licensed *CELL*ized* flooring contractors.



Display room of John T. Fisher Motor Company, Memphis, Tenn.



*Laying *CELL*ized oak floor blocks in* EVERBOND *over a wood subfloor, in a Chicago office building.*



Ball room of the Dallas Athletic Club, Dallas, Texas.

Combinations of woods, square and rectanglar units, are installed also for walls and ceilings. Write for suggestions as to novel uses.

*CELL*ized* wood floor blocks are guaranteed by *CELL*ized* Oak Flooring Inc., when laid by Licensed Flooring Contractors. The names of those licensed to use this label in your locality will be supplied upon request.

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See our catalog in Sweet's; Vol. B, pages 2173 to 2175.

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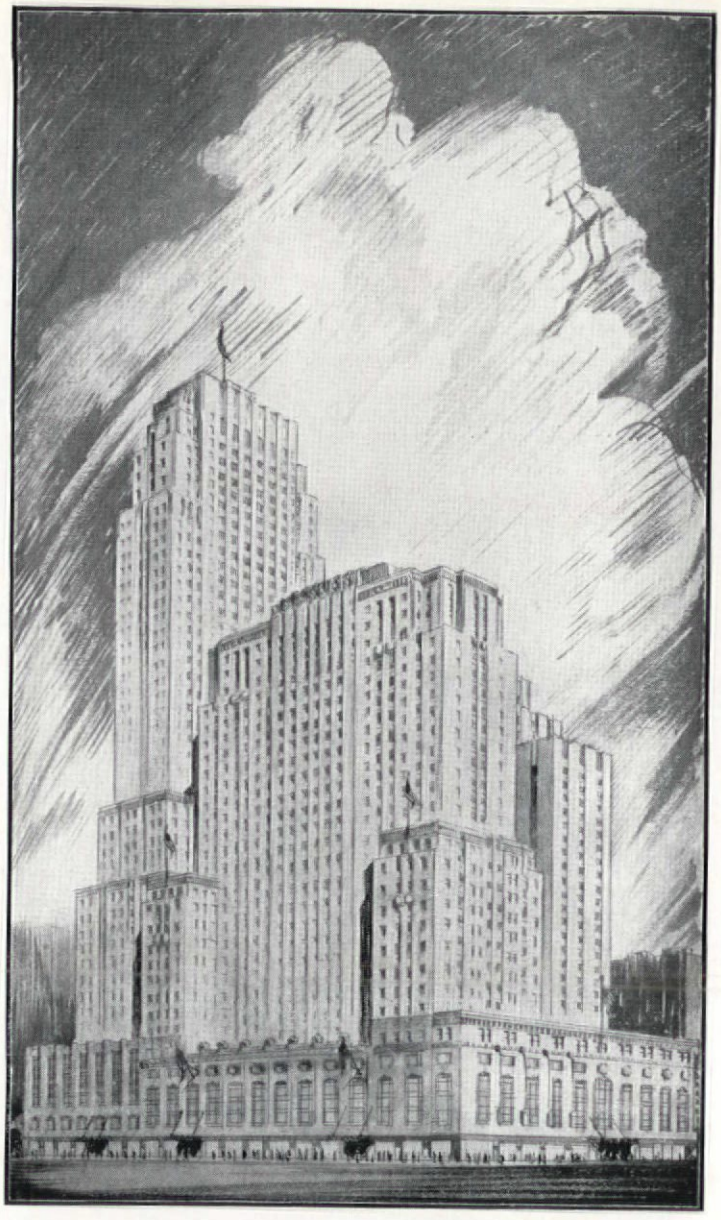
A MONUMENT TO MODERN METHODS

IN Cincinnati, on a lot that originally sold for eight dollars, a fourteen million dollar structure is rearing its 47 stories upward toward the clouds.

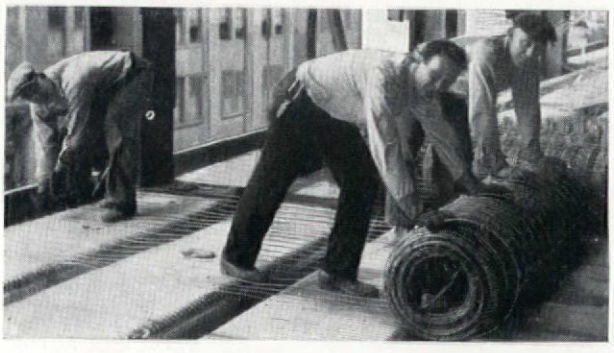
Embodying every advance of architectural and engineering science, this magnificent building will stand as a monument to the modern progress of America.

Playing an important part in this progress—enabling the successful development of plans—is American Steel & Wire Company Wire Fabric (the steel backbone of concrete).

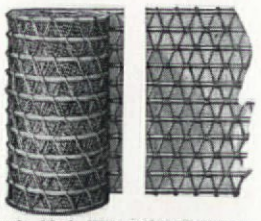
Recognized as the most efficient and economical means of concrete reinforcement, this product is in general use throughout the nation. An evidence of interest on your part will bring detailed information and literature.



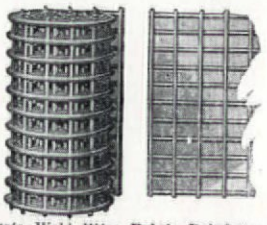
The Carew Tower, Cincinnati, Ohio—Walter Ahlschlager, Architect, Chicago—Delano & Aldrich, Associate Architects, New York—Starrett Building Co., Contractors, Chicago—Lieberman & Hein, Consulting Engineers, Chicago



Wire Fabric being laid on floors of Carew Tower



Triangle Mesh Wire Fabric Reinforcement. Furnished in rolls or sheets.



Electric Weld Wire Fabric Reinforcement. Furnished in rolls or sheets.

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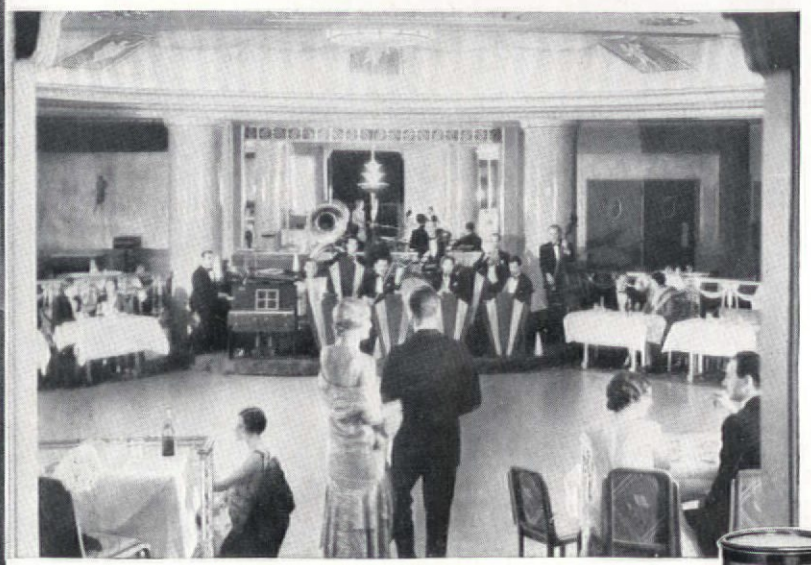
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A distinctive decorative achievement ...*the* Silver Grill *of the New* Hotel Lexington



The Hotel Lexington, New York. Architects: Schultze & Weaver.



Silver Grill Room of new Hotel Lexington. Painted with Dutch Boy White Lead and Flatting Oil by Barker Painting Company, New York City.



DECORATED with DUTCH BOY WHITE LEAD *and* FLATTING OIL

DISTINCTIVE... different... beautiful! The Silver Grill of the new Hotel Lexington is an achievement in decorative art.

Dutch Boy white lead, mixed with flatting oil, was used not only in the decoration of the Silver Grill, but in all the bedrooms, and parlors of the hotel. The rich, artistic finish this flat paint produces, as well as its extreme durability and washability, explains the preference it enjoys in modern buildings everywhere.

Another advantage of white lead as a paint material is its great adaptability. White lead is used for mixing *every* type of paint—to obtain durable, economical paint for wood, plaster, wall board or metal... undercoatings for enamel... blended or mottled effects... and to produce the plastic paint that gives the new low-relief textures now so much in vogue for lobbies and entrances.

Let us send you booklet, "Decorative Possibilities of Paint", which describes the modern finishes Dutch Boy helps to produce. We shall also be glad to send you a book containing formulas for all coats and finishes. Address branch office nearest you.



The well-known brand of Carter White Lead is also made by the National Lead Company. In purchasing either Carter or Dutch Boy White Lead, the buyer is assured of obtaining white lead of the highest quality.



DUTCH BOY WHITE LEAD

"Save the surface and you save all"

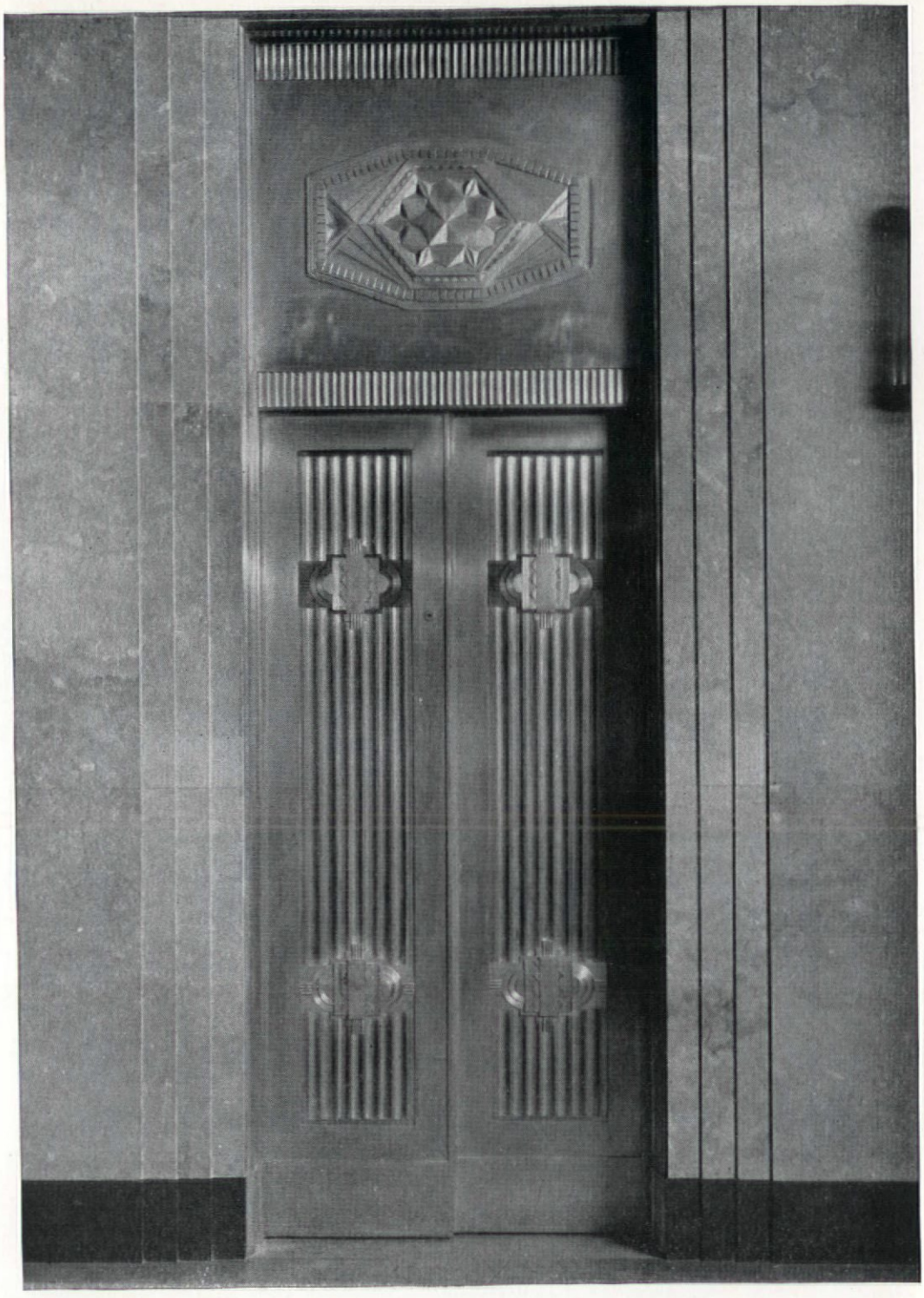
NATIONAL LEAD COMPANY

New York, 111 Broadway; Buffalo, 116 Oak St.; Chicago, 900 West 18th St.; Cincinnati, 659 Freeman Ave.; Cleveland, 820 West Superior Ave.; St. Louis, 722 Chestnut St. San Francisco, 2240—24th St.; Boston, National-Boston Lead Co., 800 Albany St.; Pittsburgh, National Lead & Oil Co. of Pennsylvania, 316 Fourth Ave.; Philadelphia, John T. Lewis & Bros. Co., Widener Building.



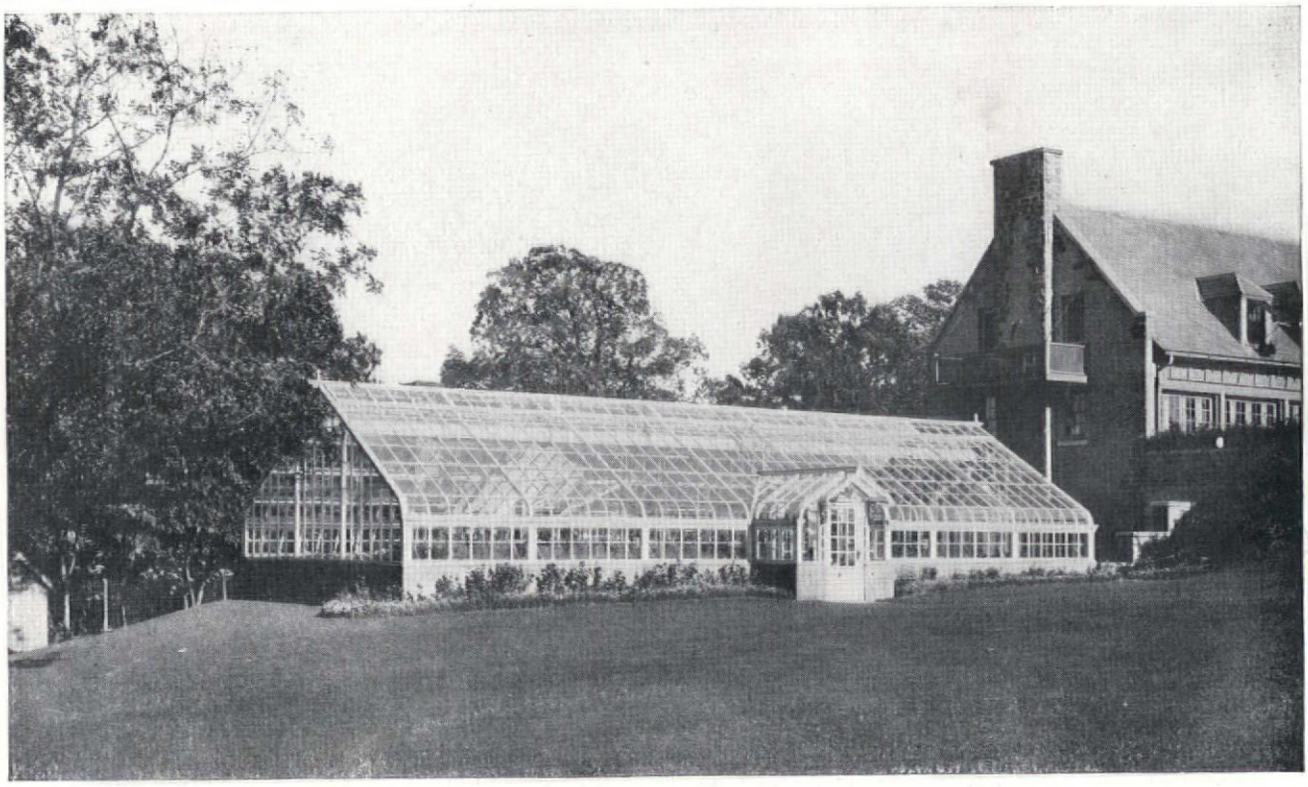
Typical parlor of suite in Hotel Lexington, painted with Dutch Boy White Lead and Flatting Oil.

FOYER OF R. J. REYNOLDS BUILDING, WINSTON-SALEM, N. C. DETAIL OF ELEVATOR DOOR OF ANACONDA NICKEL SILVER FABRICATED BY W. S. TYLER COMPANY. SHREVE & LAMB, ARCHITECTS



THE VARIOUS ALLOYS OF ANACONDA NICKEL SILVER ARE PARTICULARLY SUITABLE TO MODERN INTERIOR OR EXTERIOR DESIGN. BRILLIANT AND SILVERY IN APPEARANCE, YET WORKABLE INTO THE SIMPLEST OR THE MOST INTRICATE MOTIF. TEXTURE AND COLOR ARE UNIFORM. ANACONDA NICKEL SILVER IN RODS, BARS, SHEETS, DRAWN SHAPES AND CASTING INGOTS MEET ALL REQUIREMENTS OF LEADING FABRICATORS OF ORNAMENTAL WORK. THE AMERICAN BRASS COMPANY, GENERAL OFFICES, WATERBURY, CONN.

ANACONDA NICKEL SILVER



Custom-designed
to harmonize with your plans

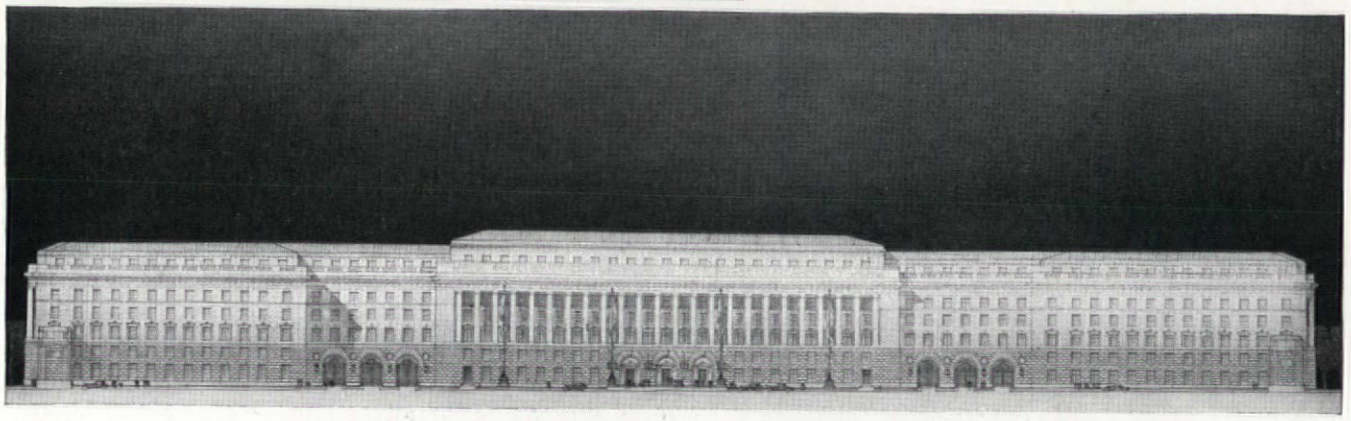
So versatile are King Greenhouses that in many instances they have been added as an after-thought to the original plans with a thoroughly artistic result . . . It is not necessary, ever, to "make room for a King"! A King house will find a place which just seems to be awaiting it . . . Of light, durable construction gracefully designed, King Greenhouses are superbly adaptable to the needs of the large as well as the small estate . . . Your letterhead will bring full information. Suggestions and sketches await your request.



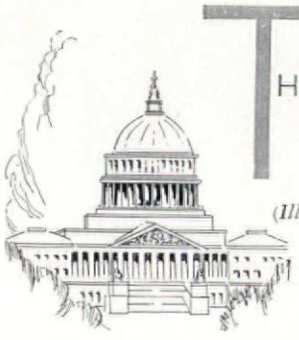
KING CONSTRUCTION COMPANY

515 Wheatfield Street — North Tonawanda, N. Y.

NEW YORK CITY · PHILADELPHIA, PA. · BOSTON, MASS. · SCRANTON, PA.
TOLEDO, OHIO · SCHENECTADY, N. Y. · BRIDGEPORT, CONN.



CHOSEN FOR UNCLE SAM



THE Department of Commerce Bldg.
Washington, D. C.
York & Sawyer, Architects
New York, N. Y.
(Illustration shows Fourteenth St. Elevation)

Once again the architects have selected Halsey Taylor Drinking Fountains to safeguard the health of Uncle Sam's employees. Not only in the government buildings at Washington but in the majority of this city's fine schools, Halsey Taylor Drinking Fountains are the logical specification. The Halsey W. Taylor Co., Warren, Ohio.



No. 631
Semi-Recess Type

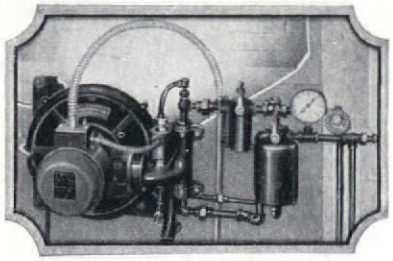
Practical, Uniform and Sanitary Drinking Stream

Halsey Taylor fountains are distinguished by practical, automatic stream control and two-stream projector. Water is always at uniform height regardless of pressure variation and the drinking mound is such that it is impractical for lips to touch source of supply.

HALSEY TAYLOR
Drinking Fountains



Combining simplicity and sturdy construction with perfection of design and performance, the Johnson Oil Burner is an outstanding engineering achievement . . . the result of over twenty-five years' experience in the exclusive manufacture of oil burning equipment for every heating and power purpose.



Satisfaction...
for you and your client

YOU can specify and use Johnson Oil Burners with the assurance that they will give enduring satisfaction . . . day in and day out, year after year.

For behind every Johnson Burner lies the experience of over twenty-five years in the installation and exclusive manufacture of oil burning equipment for every heating or power purpose.

That is why you find Johnson oil burning equipment* specified and used wherever comfort and efficiency are paramount. In small homes, large buildings, factories and industrial plants, from Maine to California, and in many foreign lands, Johnson Oil Burners are receiving enthusiastic endorsement for carefree, dependable and economical performance.

The accumulated data of our twenty-five years' experience is available to you. Our Engineering Service Department will welcome the pleasure of assisting you in the solution of your heating or power problems.

We will be pleased to send a copy of our catalogue, as published in "Sweet's," for your files. Just write *"Bulletin 4-B, please,"* on your letterhead or business card, no obligation incurred, and your copy will be sent without delay.

JOHNSON OIL BURNERS
Listed as Standard by the Underwriters Laboratories

Manufactured and Guaranteed by

S. T. JOHNSON CO.

Executive Office and Factory: 940-950 Arlington Street, Oakland, California
Factory Branches: San Francisco, Sacramento, Stockton, Calif.; Philadelphia, Pa.

930A

Member Oil Heating Institute

Oil Burning Equipment for Every Heating and Power Purpose . . .

*Johnson Rotary Burners, with either semi-automatic or full automatic control, in three styles and seven sizes, giving a range of from 250 to 41,700 square feet of steam radiation or the equivalent. We also manufacture Natural Draft, Whirlwind, Low Pressure Air and Steam Atomizing Oil Burners; also, electric or steam driven oil pumping and preheating equipment.

YOU WILL FIND OUR LOCAL REPRESENTATIVE'S ADDRESS IN YOUR TELEPHONE DIRECTORY



Gardner's Stress-Strain Apparatus
Films of paint are stripped from amalgamated tin and stretched. The force required to tear the test specimen is a measure of the tensile strength of the film and its resistance to stretching. This instrument serves in establishing standards for a new product and in constantly checking production.

WHEN WILL PAINT TEAR?

HOW much expansion and contraction will a paint film stand before it fails? An engineer would ask, what is its tensile strength?

Du Pont chemists answer these questions with scientific accuracy with the stress-strain apparatus pictured here. This is only one step taken by du Pont to assure finishing materials that meet every modern requirement.

This taking the guesswork out of paint manufacture is known as pre-testing. What are the characteristics of a paint? What will a paint do in actual use? These are predetermined for you. Pre-testing plays the leading rôle in the formulation of a new du Pont product. It is responsible for maintaining the uniform high quality of that product ever after. It is the architect's assurance that the du Pont finishes he specifies will endure and protect for a longer time.

* * *

We invite your inquiry about du Pont paints, varnishes, enamels, Duco, and other finishing products. Our architectural division is equipped to deal intelligently and quickly with special problems regarding application, decorative effects and technique.

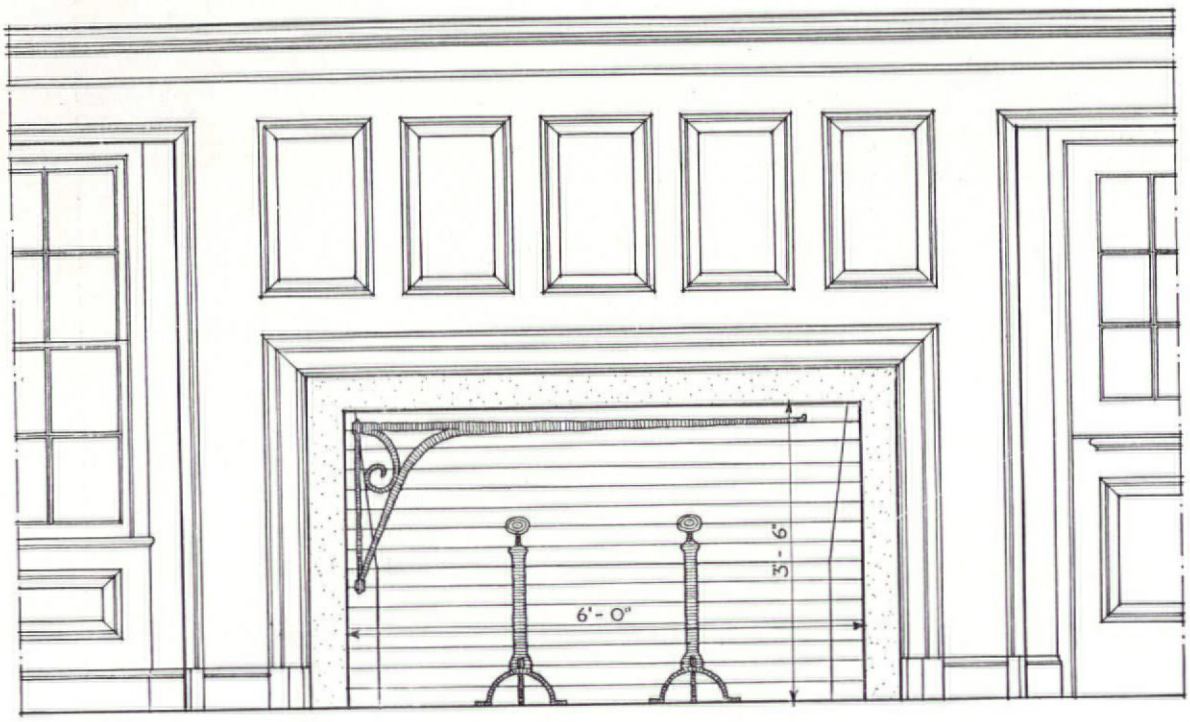
Write to Dept. AR9, E. I. du Pont de Nemours & Co., Inc., at any of these addresses: Public Ledger Building, Philadelphia; 2100 Elston Avenue, Chicago; Everett Station No. 49, Boston; 1 Balfour Building, 351 California Street, San Francisco.

DU PONT
REG. U.S. PAT. OFF.

VARNISHES . . ENAMELS . . PAINTS . . DUCO

COVERT

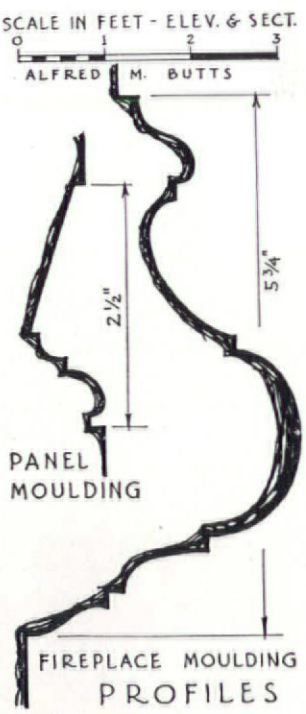
Fireplace Construction

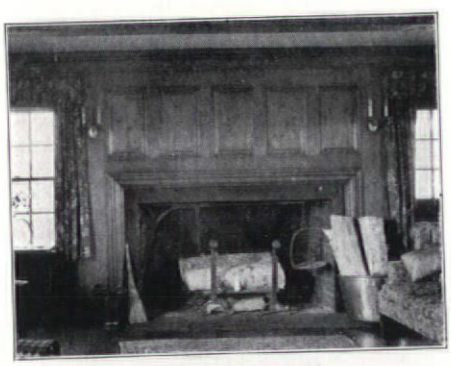


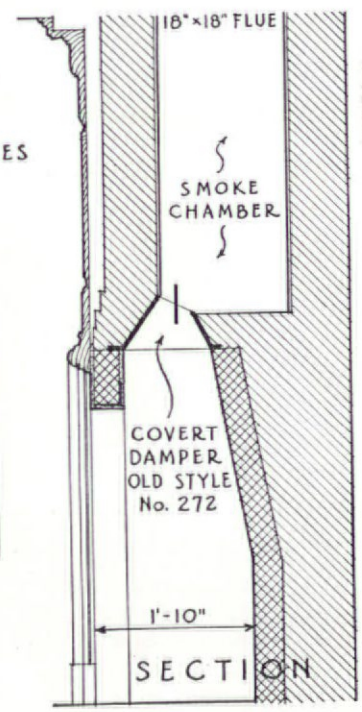
LIVING ROOM

PRETTY BROOK FARM
PRINCETON, N. J.

ARTHUR C. HOLDEN & ASSOCIATES
ARCHITECTS







COVERT
FIREPLACE DAMPERS

THIS IS THE FIRST OF A SERIES ON "SUCCESSFUL FIREPLACES"
IF YOU WILL SEND US YOUR ADDRESS WE SHALL GLADLY FORWARD YOU A COMPLETE SET OF THE SERIES

THE H. W. COVERT COMPANY, 229 East 37th Street, New York

GULF BUILDING, HOUSTON TEXAS



BETHLEHEM
STEEL COMPANY

General Offices: Bethlehem, Pa.

District Offices: New York, Boston, Philadelphia, Baltimore, Washington, Atlanta, Buffalo, Pittsburgh, Cleveland, Cincinnati, Detroit, Chicago, St. Louis.

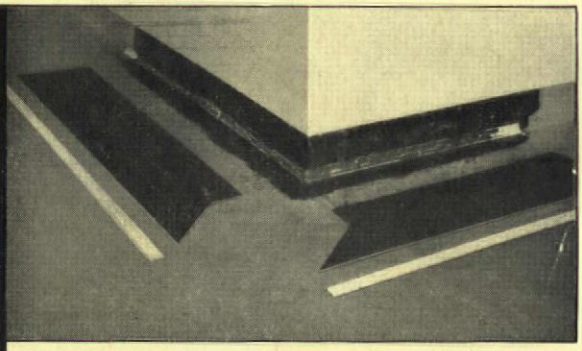
Pacific Coast Distributor: Pacific Coast Steel Corporation, San Francisco, Los Angeles, Seattle, Portland, Honolulu.

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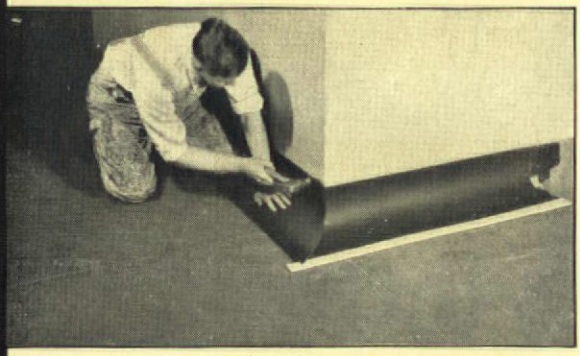
FRAMEWORK OF BETHLEHEM WIDE-FLANGE STRUCTURAL SHAPES

BETHLEHEM

THINGS every linoleum contractor doesn't know . . . . . .



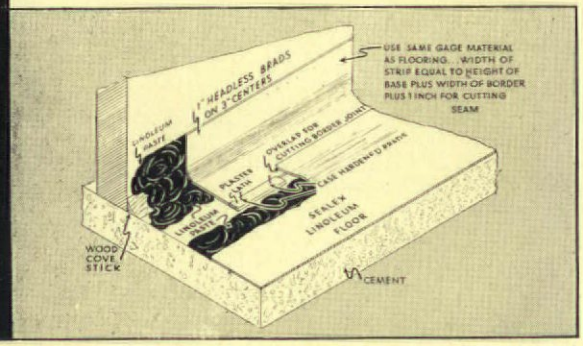
Materials assembled for laying one-piece cove-base and border in an "outside" corner. The cove-stick has been installed and Sealex Linoleum Paste has been applied on the wall.



Here we see the mechanic fixing the cove-base and border in place by means of headless brads, placed on 3" centers, 1/4" below top of base.



Picture shows mechanic completing the job, spreading linoleum paste under edge of the border and the patterned linoleum used for the floor.



The diagram above shows the materials required for a one-piece cove-base and border, and the mechanical details of assembly. The cove-stick is merely a piece of soft wood, triangular in shape, with 1½" legs rabbetted to a concave face. This method of construction gives a neat, sanitary effect at comparatively low cost. It was developed entirely within the Bonded Floors organization and is available through Authorized Contractors of Bonded Floors.

THE pictures on this page show three steps in the installation of a *one-piece border and sanitary cove-base* in Sealex Linoleum. Constructing this as one unit is one of those fine points of craftsmanship that mark the difference between a good floor and a fine floor.

This one-piece border and cove-base was developed by the engineers of the Bonded Floors organization. The men best qualified to install it are the Authorized Contractors of Bonded Floors, located in principal cities throughout the country.

Everyone admits that the customary factory-made cove-base furnishes a satisfactory job. The one-piece base, border and cove, however, possesses certain definite points of superiority. It lends itself to a much greater variety of decorative effects. It makes possible a border of any width, in any weight of material and in any color—as opposed to the strictly limited assortment of effects in the factory-made cove.

Furthermore, this Bonded Floors cove-and-border is structurally sounder than the old-style type. The number of cove cross-joints is reduced. It is less expensive to construct—and can readily be installed

(See next page)

on the job by a skilled mechanic. We recommend it for commercial and business installations and particularly for schools and hospitals. Not to mention kitchens in private homes.

We have described this Bonded Floors improvement in some detail because we consider it a typical example of the progressive flooring service offered by Authorized Contractors of Bonded Floors. The ready-cut borders illustrated on the right are another service feature available through Bonded Floors contractors. These strips can be combined into a great variety of attractive border effects—without the expense and wastage of material that is inevitable when the border is cut out by hand on the job.

Still another field in which our Authorized Contractors have a distinct edge on their competitors is in designing and laying custom-made floors. Our designers have had conspicuous success in creating floors for all types of buildings. The most conservative period design and the most radical modernistic effect can be carried out with equal ease in Bonded Floors.

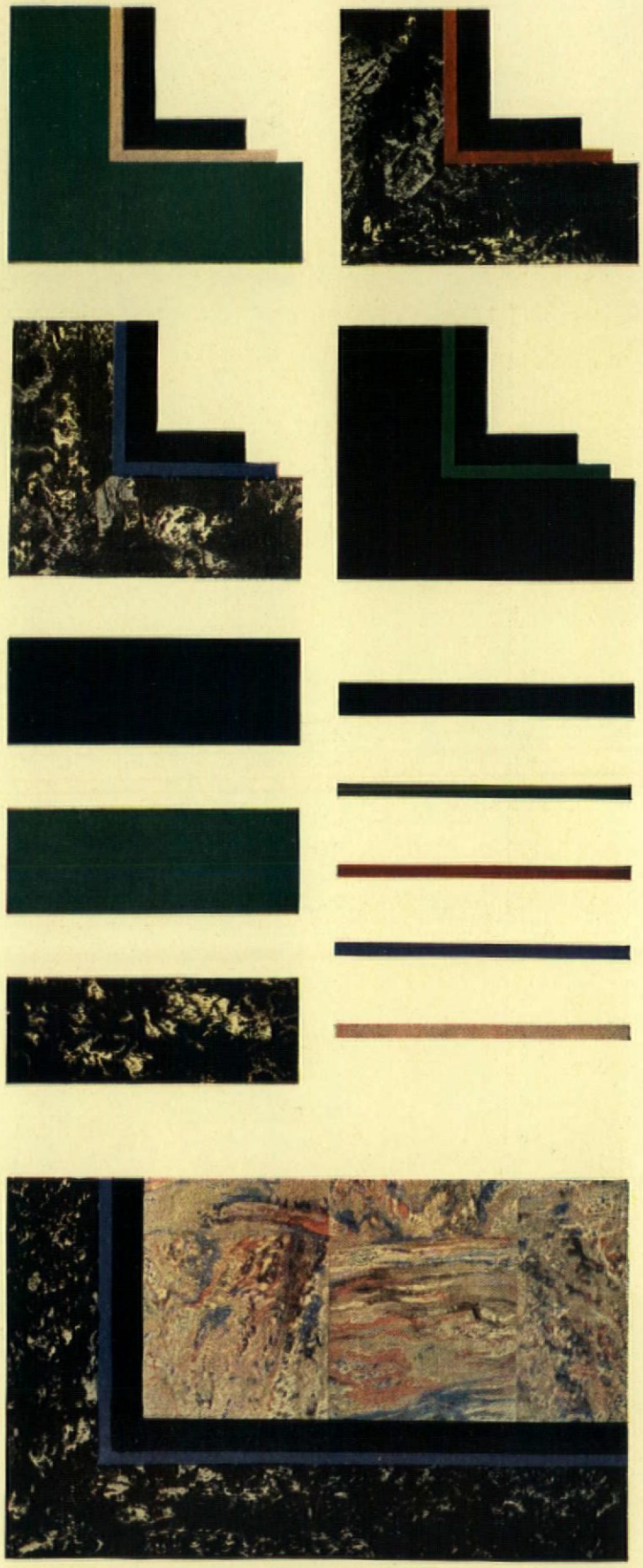
May we send you the names of Authorized Contractors near you?

CONGOLEUM-NAIRN INC. . . . *General Office:* KEARNY, N.J.

BONDED FLOORS

SEALEX LINOLEUM

Bonded Floors are floors of Sealex Linoleum and Sealex Treadlite Tile, backed by a Guaranty Bond issued by the U. S. Fidelity and Guaranty Company. Authorized Contractors of Bonded Floors are located in principal cities.



The decorative possibilities of linoleum floors may be greatly enhanced by the use of either ready-cut or custom-cut borders. Directly above, for example, is our "Leonardo" pattern (No. 3225) used with a ready-cut border assembly of black marbleized, blue and plain black strips. Other border strips and border assembly suggestions may also be seen above.

(See preceding page)



Pennsylvania Railroad Company
Freight Station and Warehouse Building
Philadelphia

Architects and General Contractors
UNITED ENGINEERS & CONSTRUCTORS

Westinghouse Elevators . . . Large savings are afforded through the higher efficiency of Westinghouse Elevators, especially so, in such commercial structures as the Pennsylvania Railroad Company Freight Station and Warehouse Building.

"Westinghouse Elevators are the logical highways of modern architecture"

Westinghouse Electric Elevator Company

ELEVATORS

When Your Design Says
"ALUMINUM"
have it executed by ART METAL

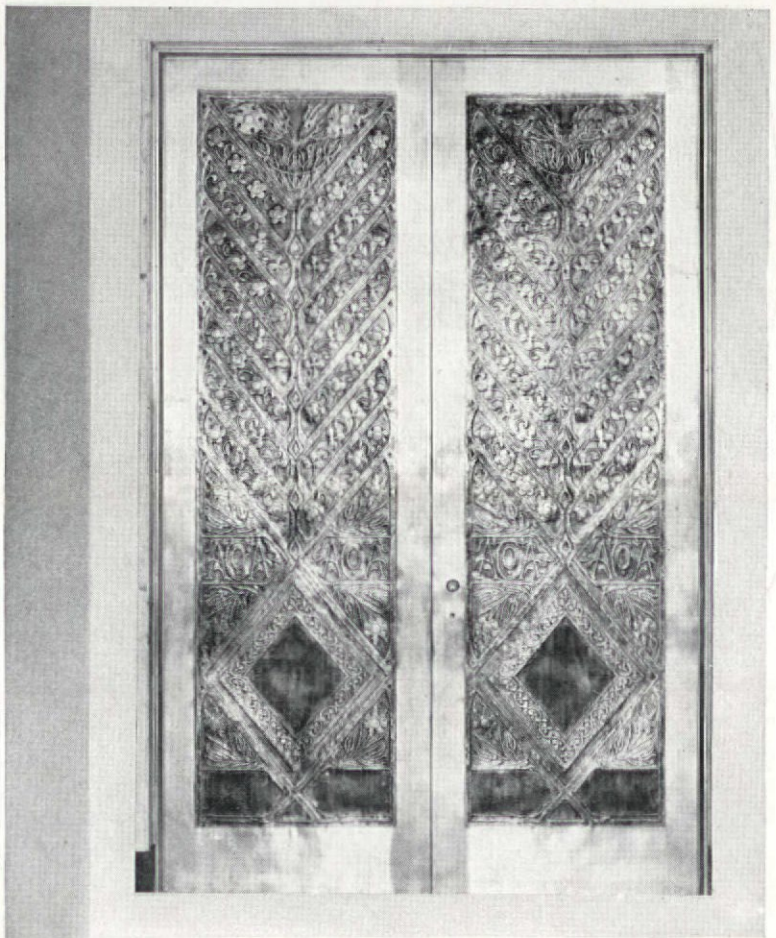
DOES it call for bronze . . . massive, imposing, delicately etched—or enameled? Or for hollow metal . . . steel doors, trim, wainscoting, partition? Or is it to be developed in aluminum? Whatever medium your design may suggest, Art Metal craftsmen can give it faithful concrete expression.

Art Metal aluminum is sailing the seas . . . in rigid furniture on the smartly equipped new U. S. scout cruisers. It's guarding a bank . . . in impressive, amazingly light and smooth-swinging double doors at the entrance to the Union Trust in Little Rock.

It's stepping out in society . . . in the new Cleveland National Town and Country Club, so luxuriously conceived by Geo. B. Post & Sons and executed by Thompson-Starrett. The grilles, ornaments, pilasters, cornices, elevator enclosures, and deft-gliding revolving doors, are all Art Metal aluminum. Art Metal workshops fabricated the handsome vestibule doors in the New Kensington Research Laboratories of the Aluminum Company of America.

Aluminum is light-weight . . . easy to handle on the job. It does not corrode . . . needs no protection from smoke and atmospheric gases . . . shines up readily. Takes lacquer, paint, or metal plating if desired. And it can be cast, rolled, drawn, stamped, pressed, forged, extruded, spun, machined, or welded.

If you have never specified aluminum . . . if you have a job you think it would do but are not quite sure . . . write to the Art Metal Construction Company, Jamestown, N.Y. We'll be glad to tell you more about its structural and decorative possibilities.



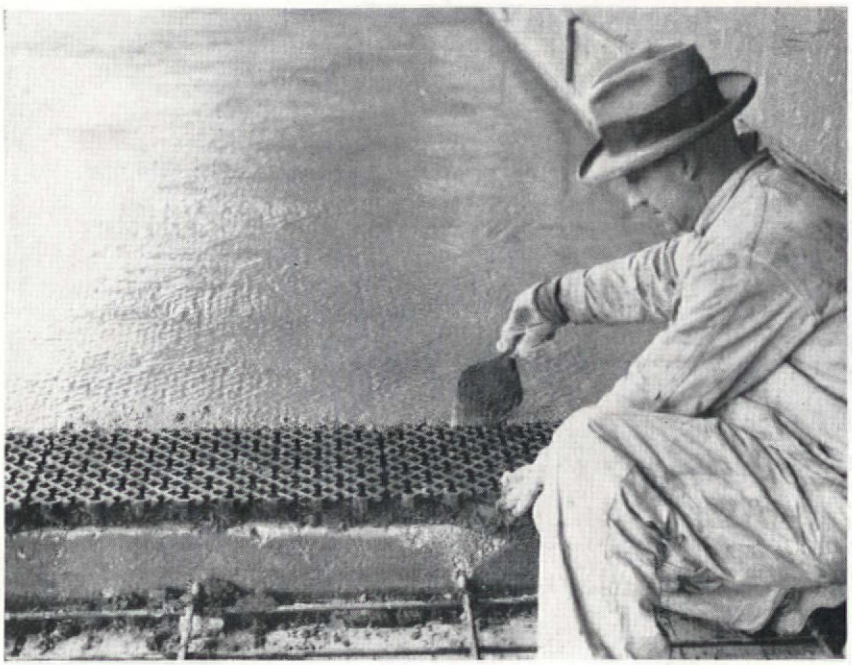
Art Metal doors with decorative, hand-hammered panel supplied for and in cooperation with the Research Laboratories, Aluminum Company of America, New Kensington, Pa.

Art Metal

JAMESTOWN ~ NEW YORK

BRONZE, STEEL AND ALUMINUM INTERIOR EQUIPMENT FOR BANKS, LIBRARIES AND PUBLIC BUILDINGS . . . HOLLOW METAL DOORS AND TRIM

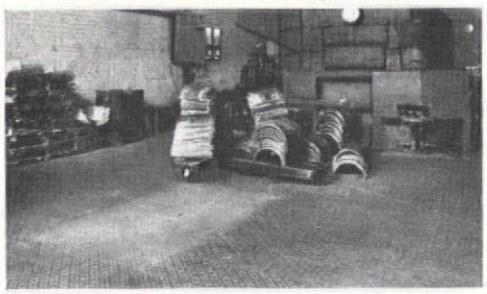
Right—3,350 sq. ft. No. 20 Snead Armor Grid—Contractor, Chas. R. Hedden Co., Newark, N. J.—installed in March 1929 for Merchants Refrigeration Co. at Jersey City, N. J. . . . after testing many floor materials, No. 20 Snead Grids were selected as most economical per foot, per year, by the owner of this R. R. platform, one of the largest refrigeration companies in the country. All of this company's plants now have Snead Grid protection.



In wide use for 18 years yet no Snead Armor-Grid installation has ever been renewed!



Above and Below—Snead Armor Grid installation in New York World Building—West Side Plant—Glenn S. Williamson, Eng., Turner Construction Co.—Contractor. 2,054 sq. ft. No. 20 Snead Armor Grid.



STILL more than that, no installation of Snead Grids has ever required any maintenance work. These are two facts indicating that heavy traffic floor areas may be armored with Snead Grids and show a very handsome saving over a short period of time.

Snead Grids are made of an exceptionally fine grade of grey iron and are acid resistant. The symmetrical pattern besides being attractive in appearance, affords perfect protection and traction against crosswise as well as longitudinal traffic. The effective armor at the surface of each Snead Grid amounts to 41% of its total area, this high ratio accounting for its great durability. As the Grids are almost entirely embedded in the flooring, traffic sounds are deadened. The rib sides are rough and bond perfectly with the floor material, eliminating the necessity for expansion bolts or other expensive anchoring devices. Two more important economies—there is no costly assembling operation to perform, each grid comes complete and is easily installed—and Snead Grids displace approximately 21% of finish floor grout by volume, an important saving when figured over a large area.

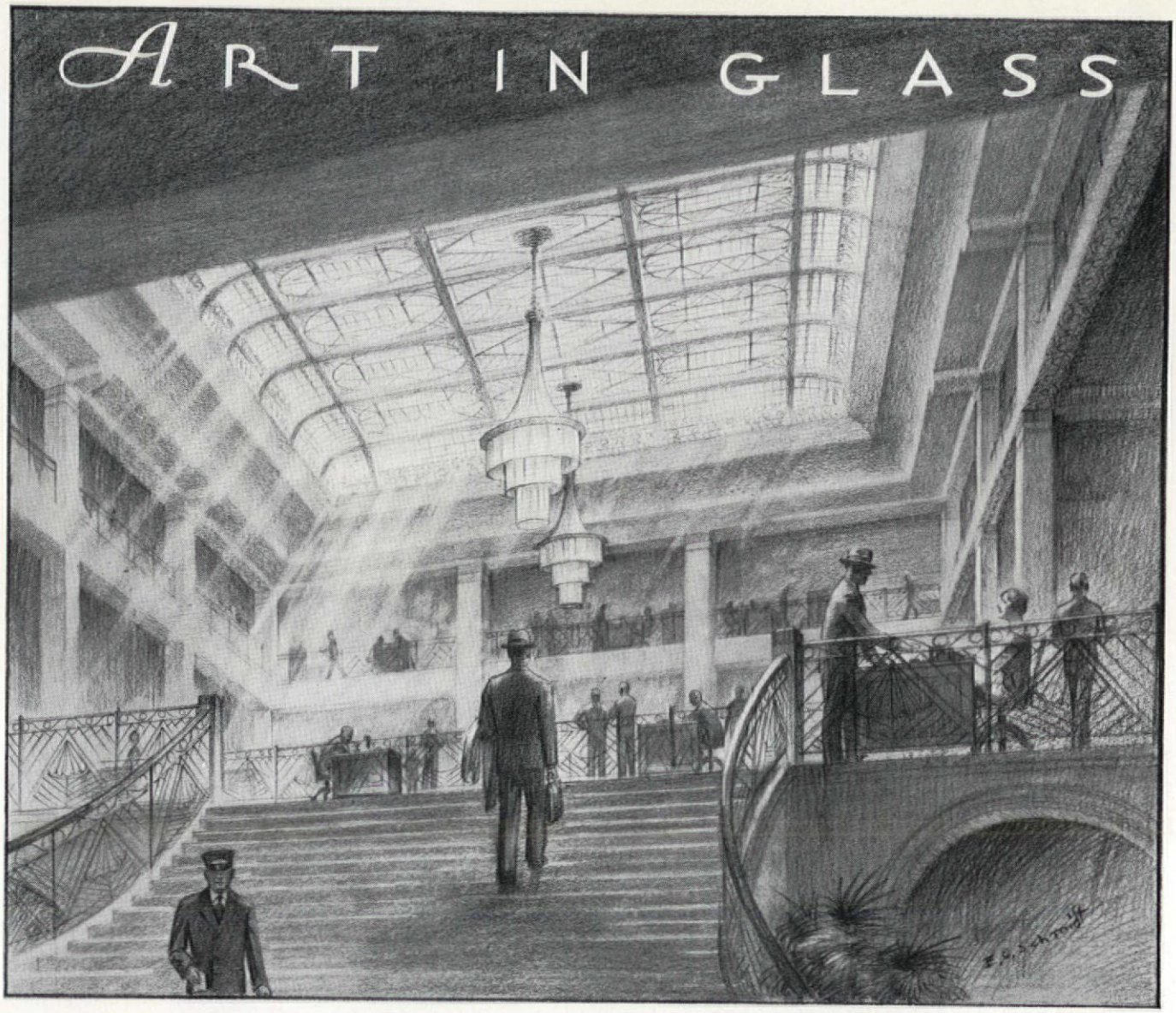
Here, then, is a thoroughly efficient floor armor for surfaces subject to severe traffic and wear—an armor proved over many years as indestructible and yet one that makes possible real economies in installation and use.

Three sizes of grids are manufactured and answer practically all requirements. These are No. 10 for lighter traffic—No. 20 for heavy traffic and No. 30 where the traffic is extremely severe. See Sweet's or write us direct.

SNEAD & COMPANY — Founded 1849

SELF-ANCHORING ARMOR GRIDS FOR CONCRETE AND ASPHALT FLOORS

92 Pine St., Jersey City, New Jersey



Windows that Decorate As well as Soften Light

BUSINESS, to be successful, must be efficient. Efficiency depends largely upon the clarity and smoothness with which the various individuals in the business think and work. Executives today realize that working conditions and surroundings have much to do with mental activity and, in order to achieve greater business efficiency, are giving close attention to such details as office beauty and light.

The gloom or glare of outside light, when filtered through the translucent beauty of colored glass, becomes friendly, happy, subdued and soothing. We, therefore, find in business structures stained glass and opalescent glass in skylights, windows, transoms and wherever raw light and uninspiring outlooks can be transformed into color and rich beauty.

As an architect, you will be interested in this trend. We will, on request, supply you with the names of nearby artists-craftsmen who will gladly assist you in working out designs and structural details for art glass lighting in the business structures or institutions which you now are planning.

Above is a suggested skylight in a modern office, using opalescent glass to subdue the glare. . . . . .

Kokomo Opalescent Glass Co.

1300 S. Market St. » » » Kokomo, Indiana

Whether the day be dull or bright, the light in this office is warm and cheery yet softly subdued and rich. . . .

MANUFACTURERS COLORED OPALESCENT CATHEDRAL GLASS , , ROLLED ANTIQUE GLASS , , MOSAIC GLASS , , GLASS FOR ART PURPOSES



In the Original Home of the Skyscraper

1 1500 Lake Shore Drive Apts., Chicago, Ill.
Architects—McNally & Quinn, Chicago, and Rosario Candella, Associate Architect, New York.
General Contractors—Turner Construction Company, Chicago
Mechanical Engineers—H. A. Durr & Company, Chicago

2 Chicago Evening Post Bldg., Chicago, Ill.
Architects—Holabird & Root, Chicago
General Contractors—McLennan Construction Co., Chicago

3 Medinah Athletic Club, Chicago, Ill.
Architect—Walter W. Ahlschlager, Chicago
General Contractors—Paschen Bros., Chicago

4 Trustees System Building, Chicago, Ill.
Architects—Thielbar & Fugard, Chicago
General Contractors—McLennan Construction Co., Chicago

5 Mather Tower Bldg., Chicago, Ill.
Architect—Hubert Hugh Riddle, Chicago
General Contractors—R. F. Wilson & Company, Chicago

6 Board of Trade Building, Chicago, Ill.
Architects—Holabird & Root, Chicago
General Contractors—Hegeman-Harris Co., Inc., Chicago

7 10 West Elm Street Apts., Chicago, Ill.
Architects—B. Leo Steif & Company, Chicago
General Contractors—Adolph Lindstrom Company, Chicago

8 La Salle-Wacker Bldg., Chicago
Architects—Holabird & Root and A. N. Rebori, of Rebori, Wentworth, Dewey & McCormick, Chicago
General Contractors—Hegeman-Harris Co., Inc., Chicago

THE FIRST SKYSCRAPER was built in Chicago. They are still building them there. A few recent additions to the skyline are illustrated here, and these buildings, like the more prominent buildings in most cities, are all "Bryant Equipped." Whether for office buildings, hotels, homes, commercial buildings, factories, schools, hospitals.....those architects and engineers who specify and insist upon the use of "Bryant Superior Wiring Devices," know that their own interests and reputations are fully protected through protecting the interests of their clients.

Have you received your copy of our new Catalog No. 30?

A-9

THE BRYANT ELECTRIC COMPANY

BRIDGEPORT, CONNECTICUT, U.S.A.

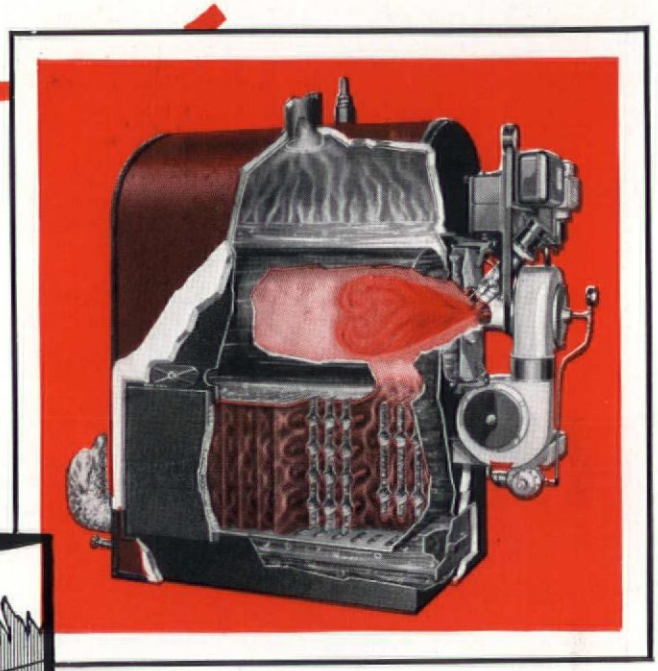
BOSTON · 50 High Street
CHICAGO · 844 West Adams Street
NEW YORK · 60 East 42nd Street
PHILADELPHIA · 1333 Chestnut Street
SAN FRANCISCO · 149 New Montgomery Street

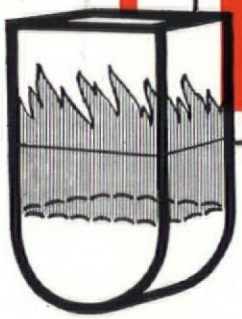
BRYANT SUPERIOR WIRING DEVICES

MANUFACTURERS OF "SUPERIOR WIRING DEVICES" SINCE 1888—MANUFACTURERS OF HEMCO PRODUCTS


MAKE STORE-TOURING EASY
UPPER Floors of Department Stores can today be given their full value by the proper number, grouping and design of Elevators, Escalators and Gravity Package Conveyors.
Adequate store transportation is a scientific problem which we can help you solve.
OTIS ELEVATOR COMPANY
OFFICES IN ALL PRINCIPAL CITIES OF THE WORLD







THEY TURNED THE BOILER UPSIDE DOWN

When Garfield A. Wood, famous engineer, business man, and speed boat king, installed an oil burner in his home, he liked its automatic heat but his engineering experience told him it was too costly. He discussed this problem with that prominent engineer and inventor, the late H. M. Jerome, who later interested Prof. W. E. Lay of the Automotive Engineering School at the University of Michigan.

These two scientists studied boilers . . . and found them surprisingly inefficient. The old-type boiler was built for coal firing. Its short, wide flues were not designed to absorb the intense heat generated by oil or gas burners. Consequently stack temperatures were high. Instead of being held in the heating plant the heat was being lost up the chimney.

Boilers had been built that way for many years. That's where the trouble lay . . . they weren't designed for oil and gas burners. So the two engineers did an unheard of thing. They LITERALLY turned boiler design UPSIDE DOWN. The combustion chamber, where the hottest gases are, is located at the TOP of the boiler, toward which the hottest water naturally moves. Only this smallest portion of the water circulates and it alone absorbs over half the radiant HEAT of the fuel. The cooling gases pass downward . . . against the cooler water in the system . . . through flue passages, formed by large, flat water tubes, to the outlet flue located at the very bottom of the boiler. Baffles on the tubes cause a scrubbing action of the gases against the metal, effecting almost perfect heat transfer.

But progress did not stop with the completion of a boiler which delivers a previously unheard-of heating efficiency. A burner equally revolutionary was designed, and the two engineered into the Gar-Wood Balanced Heating Unit. All the interesting details are told in a new book. You'll want a copy . . . so use the coupon, please.

Responsible organizations now distributing through the heating trade should investigate the Gar-Wood franchise. Write the factory for details.

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Gentlemen: Send me...without cost or obligation...a copy of "A New Principle of Generating Heat at Low Cost."

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(REG. U. S. PAT. OFF.)



Note how combination of Wilson Sectionfold and Vertical Rolling Partitions sub-divide the large hall into many smaller classrooms. Partitions folded or rolled back out of the way at will.

Lake Street Presbyterian Church, Elmira, N. Y.
Harry M. Haskell, Archt.

To Keep Within The Appropriation

VERY often it is desirable to use Wilson Sectionfold Partitions for sub-dividing auditoriums in churches, schools, etc., but ample funds are not available.

In this event we suggest a combination of Sectionfold Partitions with Wilson Rolling Partitions as illustrated above. This effects a considerable saving in price with no lessening in the utility or convenience of the room.

Glass may be introduced in the Sectionfold Doors to provide light, if necessary, and shuttle doors between classrooms, or between corridors and classrooms may be used for convenience.

When all the Partitions are folded or rolled up the entire room is free to be used as an auditorium when necessary.

We are at your service for furnishing data for just such layouts as this.

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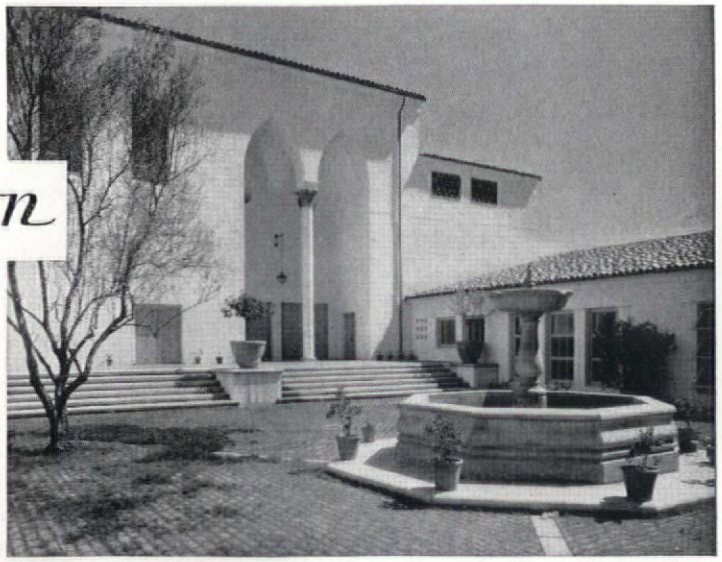
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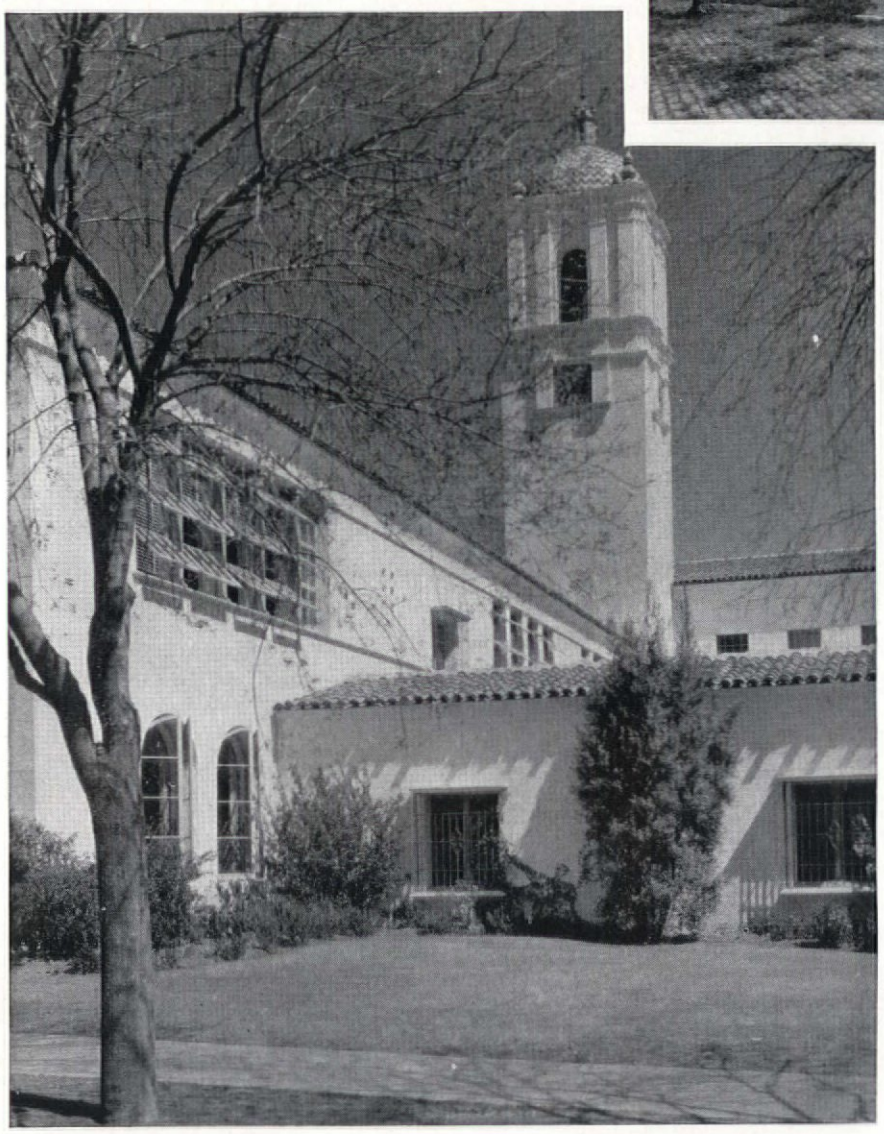
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These views are of the Hawthorne School, Beverly Hills, California, of monolithic construction throughout, with decorative details cast in place. R. C. Flewelling, Architect.

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Concrete for permanence and firesafety

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CHICAGO

SOFT LIGHTS
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The Cowles House, Farmington, Conn., built of White Pine in 1795 and standing today

SIDING and trim painted ivory white . . . green shutters. Within, a friendly room with bright chintz curtains, beckoning the sunlight . . . hooked rugs, wide plank flooring, a mantel of exquisite detail. A fine old house to live in!

Good people *have* lived in it, for generations. For this house, like so many others throughout New England, was constructed when the Colonies were young. And here, as in the great majority of cases, the men who built it used White Pine. . . . Genuine White Pine may be selected for the homes you plan!

Idaho (genuine) White Pine is nature's finest building lumber. Perhaps the best evidence of that fact is its extraordinary resistance to time and weather. Even after many years of wear, facing the sun and storm and cold, Idaho White Pine retains its rich and impressive beauty. . . . Soft textured, with a delicately figured grain, Idaho White Pine is easy to work. And because of its low density cell structure, it possesses splendid insulating properties.

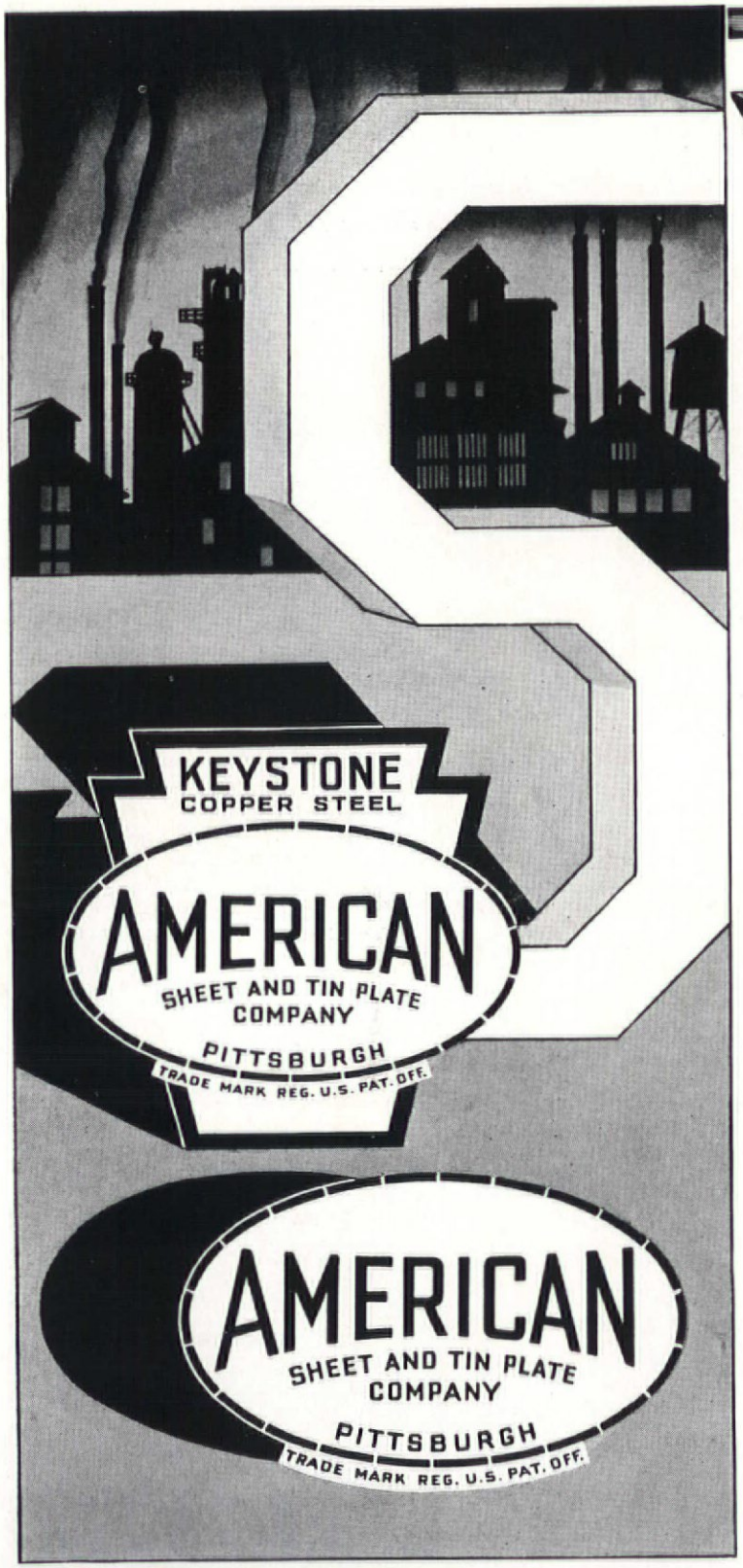
For almost every building purpose . . . in all architectural types . . . Idaho White Pine is most acceptable. The dark rich notes of paneling . . . a fine staircase with twisted newels and balusters . . . a doorway, with flat pilaster treatment . . . a built-in dresser, painted to match the walls . . . for new homes or remodeling old farmhouses, Idaho White Pine will give lasting and beautiful service.

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LOOK into the majority of today's commodities—and the base material of which they are made will generally be found to be steel. Whether the use be great or small—in the air, or on land or sea—there is scarcely a piece of construction or fabrication which does not contain some steel. Symbols are therefore placed on better steel as signs of quality, dependability and durability; as an assurance of SERVICE. For service to humanity is, after all, the only valid reason for the existence of any industry.

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TIW-68



Woodbury County Court House, Sioux City, Iowa. William Steele, Architect

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Designed in the modern spirit, the Woodbury County Court House at Sioux City, Iowa, is an interesting example of the use of Crittall Casements in new-style architecture. In the window treatment, full advantage was taken of their straight, narrow lines and angular steel construction—with the result that the casement installation is not only striking in effect but also in complete harmony with the character of the building.

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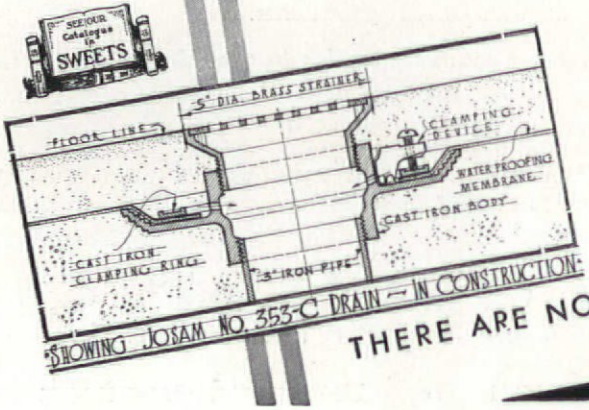
The double drainage flange extending laterally from the Josam Drain body catches and diverts seepage through the weep holes into the drain proper. The Josam Catalog G gives full details, also illustrates and describes over a hundred different practical sanitary devices. Write for your copy.

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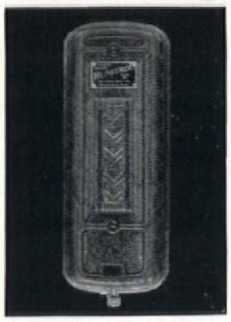


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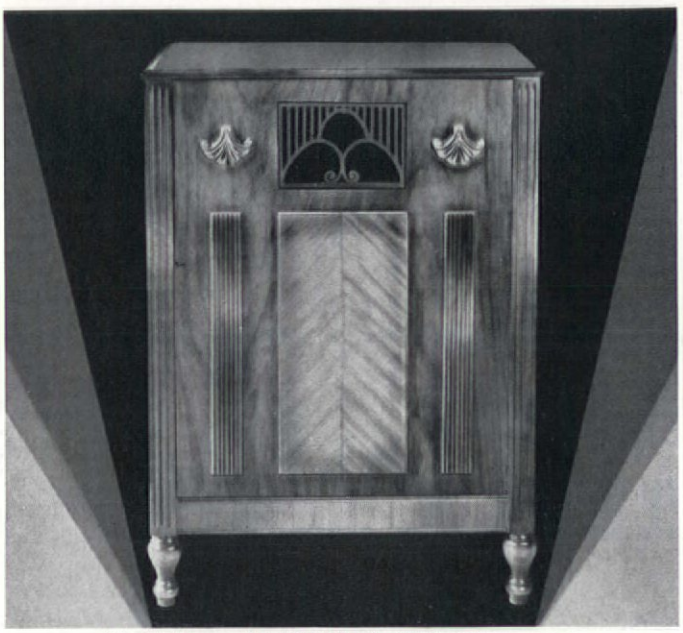
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ANY desired relative humidity, controlled within definite and positive close range by the patented Lewis Humitrol! This remarkable Humidity Control is standard equipment with all Lewis Air Conditioners. Consider the advantages of such an instrument—never any danger of excess humidity—never a lack of sufficient humidity. You simply set the Humitrol (as easy as regulating a room thermostat) for the relative humidity you wish to maintain. The production of this humidity is placed under full automatic control. The patented Lewis Humitrol is typical of the thoroughness shown by Lewis Corporation Engineers in designing air conditioning equipment thoroughly sound from an engineering and performance standpoint. We shall be glad to send, at your request, literature descriptive of Lewis Air Conditioners together with a copy of our booklet, "Controlled Humidity and Human Comfort."



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PEELLE
FREIGHT ELEVATOR
DOORS


need a ladder?
not on your life!



No climbing down a ladder to reach *this Sewage Pump!*

A JENNINGS *is located on the floor, outside and away from the pit*

EASY to get at? Of course! The Jennings Suction Sewage Pump is accessible on a moment's notice.

None of the working parts of this new unit are submerged. Pump, motor and controls are installed out on the floor . . . always within easy reach. There is never any need to lift the pit cover or to climb down into the pit.

Servicing a Jennings is a simple matter, too. The impeller is removable for inspection or cleaning, without disturbing packing, piping or shaft alignment. The entire unit can be disassembled quickly.

For complete information, write for Bulletins 113 and 124.

NASH ENGINEERING COMPANY
33 Wilson Road, South Norwalk, Conn.

Note these 10 *features of Jennings Des*

1 Motor is commercial, ball-bearing type selected for dependability, always available from stock.

2 The only two moving parts are mounted on a single heavy shaft requiring but one stuffing box, eliminating flexible coupling.

3 A rugged supporting bracket, integral with motor end shield, makes pump and driving motor a single compact assembly in perfect alignment.

4 The non-clog impeller is accurately balanced, liberally proportioned, readily reached.

5 There are only two bearings to lubricate.

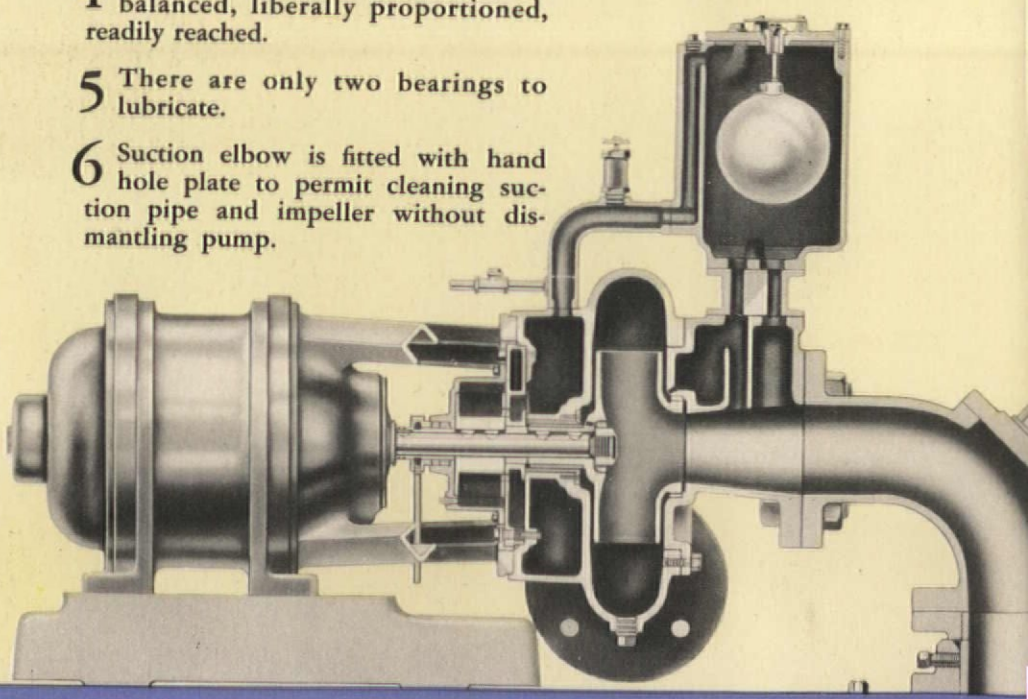
6 Suction elbow is fitted with hand hole plate to permit cleaning suction pipe and impeller without dismantling pump.

7 Priming unit is a simple, sturdy Hytor.

8 Iron catch basin has gas tight

9 Controlling float switch is total closed and oil immersed.

10 Ball float has adjustable stop.



Jennings SUCTION SEWAGE *Pumps*

NASH ENGINEERING COMPANY SOUTH NORWALK, CONN., U. S. A.



Immense Continuation School, Milwaukee, Wis., and a section of the Bloxonend Floor in one of its two great gymnasiums. Van Ryn & De Gelleke, Architects.

NATION'S LARGEST SCHOOL BUILDINGS USE BLOX-ON-END FLOORS

THE Central Continuation School, Milwaukee, Wisconsin --- one of the Nation's largest schools, with 20,000 students enrolled --- contains two great gymnasiums. Both are equipped with Bloxonend Flooring.

Bloxonend Flooring is durable, smooth, even and absolutely splinterless --- it is made of yellow pine and the tough end-grain forms the wearing surface. The end grain fibres furnish a secure footing and prevent many accidents due to slipping.

Bloxonend Flooring is resilient, quiet and fast; it takes an excellent finish and maintains an attractive appearance indefinitely.

Leading architects everywhere specify Bloxonend Floors in the better schools --- for gymnasium, shops, corridors and auditoriums. Faculties and school boards endorse them.

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BLOX-ON-END FLOORING



Bloxonend is made of Southern Pine with the tough end grain up. It comes in 8 ft. lengths with the blocks dovetailed endwise onto baseboards

Lays Smooth Stays Smooth

Leading School Architects specify Bloxonend Floors for Shops and Gymnasiums in the country's best schools.



● A charming time-worn texture was given the walls of this and other buildings on the place of Michael Gavin, Jericho, L. I., by using cinder blocks of varying size which had been sprayed with water while still soft. These walls called for a roof that also simulated age, so Hopkins and Dentz, the architects, chose IMPERIAL Shingle Tiles. In color and texture they are amazingly faithful reproductions of tiles which have seen centuries of use.

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Alcoa Aluminum Window Sills

were used in the Central Union Bank, Evansville, Indiana

-Alcoa Aluminum Spandrels, of course



Central Union Bank, Evansville, Indiana. Architects, McGuire and Shook. Associates, Walker and Weeks. Contractors, International Steel and Iron Co.

In designing the Central Union Bank, the architects, Messrs. McGuire and Shook, were mindful of the example set by the largest metropolitan buildings. They specified window sills of Alcoa Aluminum. These sills are of extruded aluminum. 112 of them, each 4 ft. 6 in. long, have a total weight of approximately 819½ lbs. They also used Alcoa Aluminum spandrels—a practice that is rapidly becoming standard with most architects.

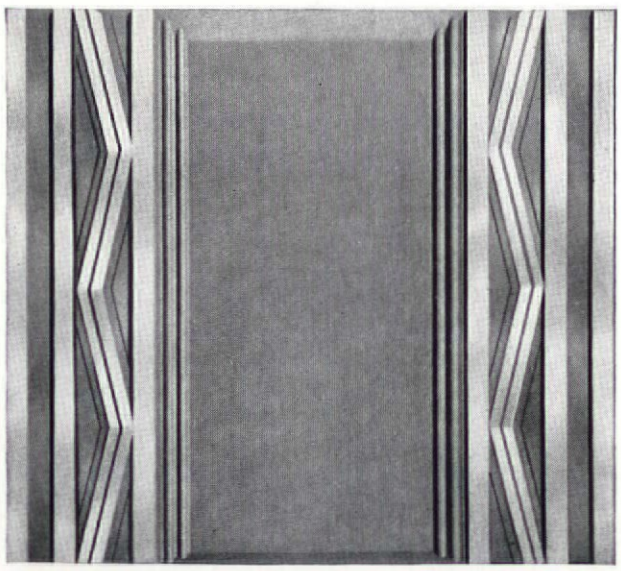
By using these Alcoa Aluminum sills and 112 Alcoa Aluminum spandrels 4 ft. 8 in. x 4 ft. 4 in., weighing approximately 10,784 lbs.—the architects lifted about 25,000 lbs. of surplus dead-weight from the face of this bank building. And they saved money.

In the matter of first cost, Alcoa Aluminum building materials can be bought at prices that compare very favorably with the prices of the same products made of other metals. But Alcoa Aluminum weighs only ⅓ as much as old-fashioned metals. It costs you far less to ship, truck and erect. In addition, it does not require painting. It can be high-lighted. It cannot rust—weather will not make it streak adjoining surfaces.

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"These Aluminum Spandrels and Sills shall be made of Alcoa No. 43 alloy, having a silicon content of 5%. The average tensile strength shall be 17,000 lbs. per sq. inch and the average elongation of 5% in two inches. The weight shall not exceed .097 pounds per cubic inch. The surface shall be free from imperfections and in all respects equal to sample submitted."



These Alcoa Aluminum spandrels are 4 ft. 8 in. by 4 ft. 4 in. 112 of them weigh approximately 10,784 lbs.

ALCOA ALUMINUM



CONSTANT raising and lowering of windows with every change in weather demands mechanical window equipment of the highest order. "American" Sash Chain is an important item in this equipment.

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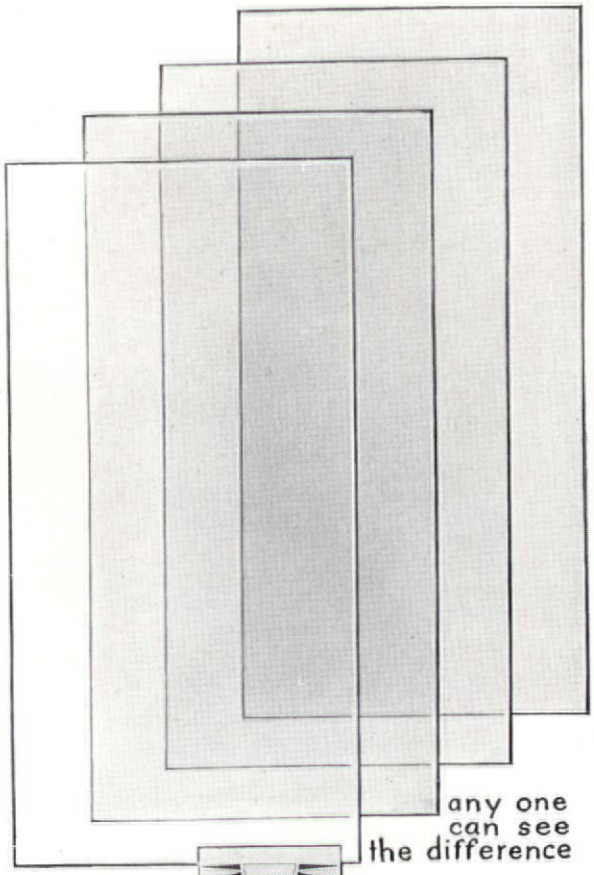
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The WHITEST Glass made for Windows



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SIMPLICITY, - AND - QUIET - DIGNITY - OF - A - SLATE - ROOF - ARE ATTRIBUTES - OF - GOOD - TASTE - THE - UNFADING - TONES - OF - SOFT GREEN - AND - MELLOW - BLENDINGS - OF - MOTTLED - GREEN - AND PURPLE - WHICH - NATURE - HAS - SO - BOUNTEOUSLY - BESTOWED - ON MATERIALS - OF - HER - OWN - PRODUCTION; - ARE - HAND - WROUGHT BY - CRAFTSMEN - FROM - THE - ROCK - INTO - SHAPES - OF - VARIOUS THICKNESSES - AND - THEN - SKILLFUL - DESIGNERS - ACCOMPLISH - THE DESIRED - EFFECTS -

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GRANVILLE,
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This Vault Door provides 6 hours of heat resistance

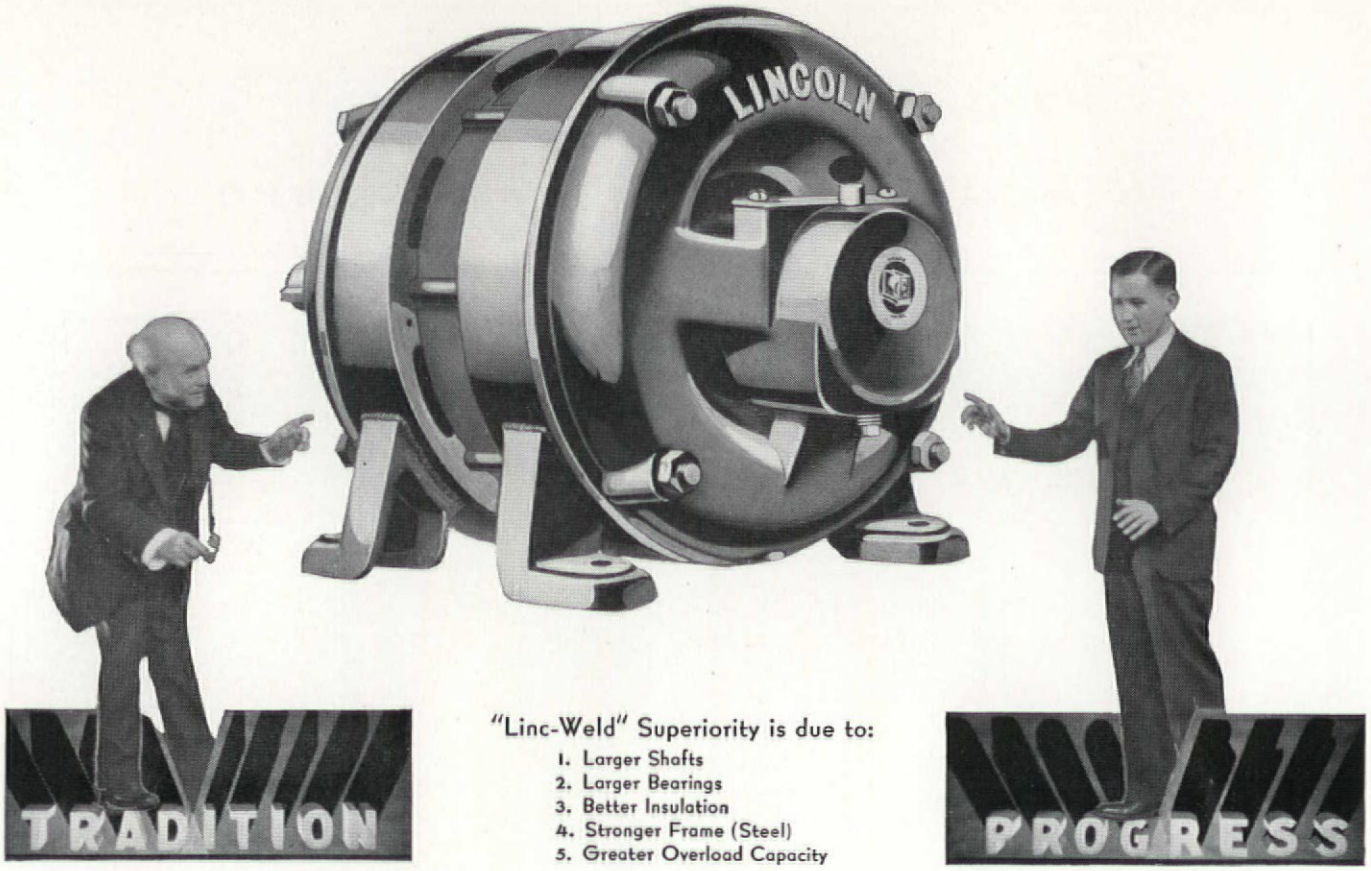


The Diebold Vault Door shown here is built to afford protection against the most intense heat. Insulation in this door is reinforced entirely independent of the outer door plate. Strains that may be set up in the outer frame and door plate cannot in any way affect the insulation. All four sides are constructed with tongue and groove jam. An inclined metal foot bridge with rubber tread leads to the vault . . . We build a style and a size of Diebold Vault Door for every building requirement. Specify "Diebold" in your building plans.

Diebold Safe and Lock Company

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"Linc-Weld" Superiority is due to:

1. Larger Shafts
2. Larger Bearings
3. Better Insulation
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5. Greater Overload Capacity

"Here, Lad—

You've been lambasting the motors we're now using ever since you got acquainted with the 'Linc-Weld.' But I want to tell you that you've overlooked one superior feature our old motors have—"

"Stop, Pop—

Don't tell me what it is, for it will spoil the spell of the mystery.

But granted there *is* one, it couldn't be large size shafts and bearings because 'Linc-Weld' has the largest.

It couldn't be modern manufacture because the 'Linc-Weld' is made of STEEL — better.

It couldn't be insulation or overload capacity because we've conducted tests which show 'Linc-Weld' to be superior.

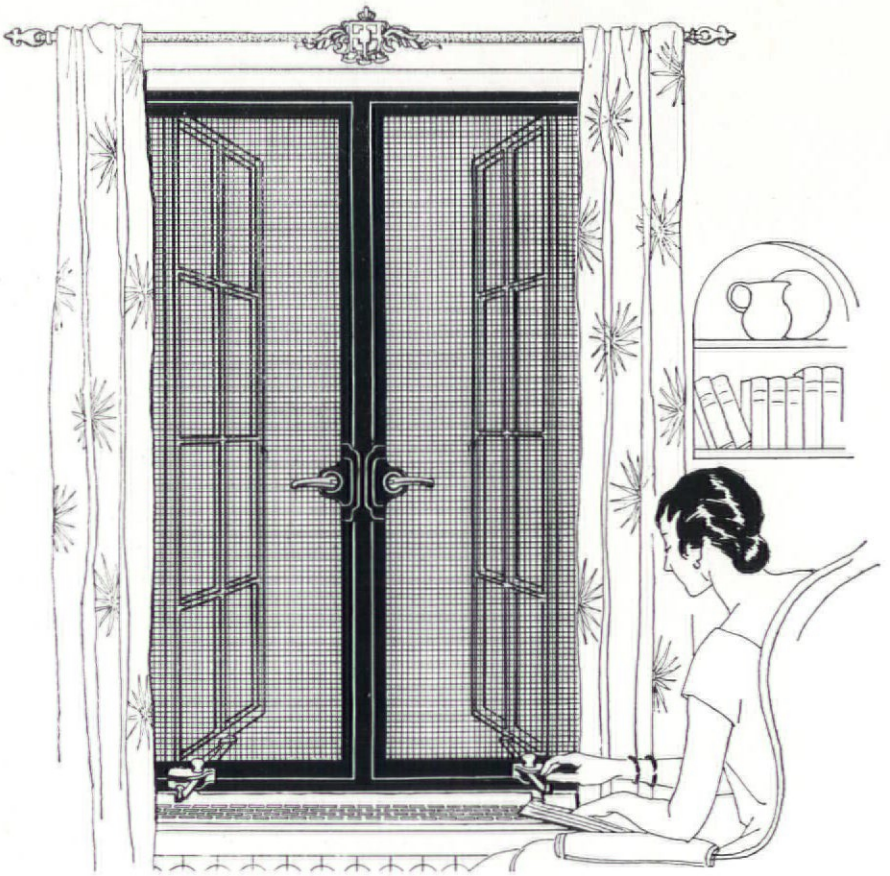
So, Pop, your one point howling for recognition is up against the 5 superior points of 'Linc-Weld', much as the well-known piccolo player trying to outclamor the one-man band."

THE LINCOLN ELECTRIC COMPANY
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Equipped with Fenestra Interior Screens, Fenestra "Fencraft" Casements offer the architect *screen-free* operation: they are opened, closed and securely locked through the screens, but without touching them. When desired, however, a Fenestra Screen may be removed from the inside almost instantly, with a minimum of effort . . . Tightness of screens to window is permanently insured by the non-warping, metal-to-metal contact of the *flat screen frame* held firmly against the *flat casement frame.*

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"Fencraft" Casements are built by craftsmen in the shops of America's oldest and largest steel window manufacturer, with local offices in 217 cities. Ask for new catalog which gives complete "Fencraft" details.

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Detroit, Michigan

Fenestra
STEEL CASEMENTS (Screened)

TRAPPED



Steel Lath would have prevented this

AWAKENED to the smell of smoke! The mad scramble to arouse the family! A dash to the bedroom door . . . driven back . . . the hall and stairs a seething mass of flames . . . a paragraph in the next day's paper tells the story.

Approximately 7,000 people lose their lives in residential fires each year. It is estimated that at least 50% of these tragedies could be eliminated if architects, builders and owners would insist upon fire safe means of egress.

Steel lath protected walls and stairways are preventing such tragedies. Underwriters' Laboratory tests have definitely proved that steel lath covered with ¾" of plaster on both sides of an ordinary stud partition, will resist the hottest flames for one hour—time enough to save lives—time enough for the fire department to arrive.

If steel lath had only this one advantage it would be well worth its *slight* additional cost. But when it is considered that this product prevents plaster cracks and lath streaks—protects the expensive interior decorations, its use becomes a real economy.

Steel roofing tile is beautiful, requires lighter supporting members, has low maintenance cost, and is complete protection against flying sparks and brands.

Steel Building Products for Practically Every Need

Check them off—steel lath, steel joists, steel doors, steel trim, steel wall tile, medicine cabinets, laundry trays, steel radiator enclosures—these and many others mark the modern building. Each brings a definite saving of time, money, labor, space, weight or fire loss . . . If you desire full information on any steel building products—write Trade Research Division, National Association of Flat Rolled Steel Manufacturers, Terminal Tower Building, Cleveland, Ohio.

Save with Steel LATH



The Boiler for the 3 Prospects You Know so Well

1 The prospect to whom an actual saving in money is very welcome. Not a *single* saving in the first cost of his boiler. But a *yearly* saving in the cost of his fuel. A 20 percent yearly return on his boiler investment.

2 The prospect, who, because he is a good business man, and irrespective of the money involved, takes pride in getting his money's worth in everything he buys.

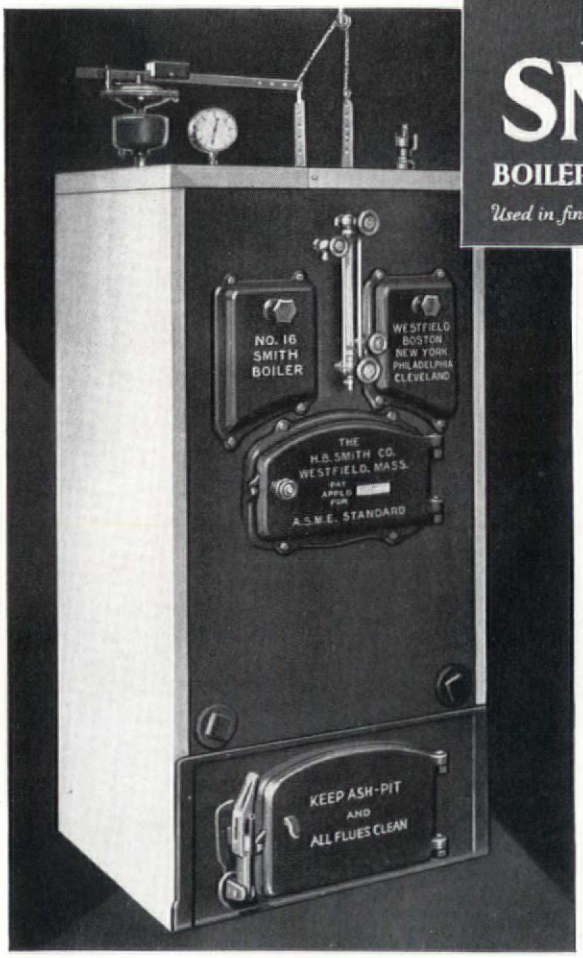
3 The prospect who may be of moderate means or who may be very wealthy, but who, whatever he is, has an inborn hatred of waste in any form.

EFFICIENCY FEATURES OF THE NEW SMITH "16"

- Abundant Fuel Space
- Extra Large Combustion Space
- Fire Brick Lined Fire Pot
- Auxiliary Air Supply
- Fire Surface Galore
- Especially Adapted for Gas & Oil
- Air-Cell Insulation for Jacketed Boilers

The H. B. Smith Boilers for steam, hot water and vapor heating; radiators; and hot water supply boilers; for every type and size of private home, office building, factory and public building.

THE H·B· SMITH
BOILERS & RADIATORS
Used in fine homes and buildings since 1860



These three prospects will be forever grateful to you, their Architect, for specifying one of the New Smith "16" Boilers; or one of the larger Mills Boilers where the size of the house requires it. Grateful not only for heating economy, but also for luxurious heating comfort.

We will gladly send you at any time upon request a copy of our new book, "The New Smith 16" that you can give to your prospects for their information. Address, The H. B. Smith Co., Dept. E-53, Westfield, Mass.

SALES OFFICES AND WAREHOUSES:

NEW YORK 10 E. 41st St. | BOSTON 640 Main St., Cambridge | PHILADELPHIA 2209 Chestnut St.

CLEVELAND • WESTFIELD, MASS.



Six stories of polished black granite produce a distinctive base for one of New York's most beautiful buildings . .

Fuller Building
57th St. and Madison Ave.
New York City
Walker & Gillette—Architects

National Building Granite Quarries, Assn.

31 STATE STREET H. H. Sherman, *Secretary* BOSTON, MASS.

IN THIS ISSUE

CONTRIBUTORS

Walker Evans: *a Brooklyn photographer recently returned from Europe and now engaged in commercial photography in Philadelphia and New York.*

Howard T. Fisher: *author of the Country House article which appeared in the November, 1929 issue.*

Frederick J. Kiesler: *an Austrian architect who has been practicing in New York, specializing in theatre work, and author of a recently published book on contemporary architecture.*

Robert E. Lederer: *a German architect specializing in restaurant design.*

William Stanley Parker: *contributing editor and architect practicing in Boston, well-known for his study of the legal aspect of architecture.*

Frederick P. Platt: *a New York architect specializing in planning of restaurants and athletic clubs.*

Giles Gilbert Scott: *an English architect who has designed many churches, among them the Cathedral at Liverpool.*

CALENDAR OF EVENTS
GENERAL ANNOUNCEMENTS

September	Exhibition of modern Architecture and Industrial Arts at Stockholm, Sweden.
Sept. 12-Nov. 15	"Man and Machines," an exhibit representing western industrial civilization, at Museums of the Peaceful Arts, 220 East 42nd Street, New York City.
September-October	International Hygienic Exhibition at Dresden, Germany. Buildings include a model hospital and a model housing project.
Sept. 7-14	Twelfth International Congress of Architects, Budapest, Hungary.
Sept. 8-13	A course of lectures on *Fundamentals of Architecture* for members of Illuminating Engineering Society, conducted by the School of Architecture, Columbia University, N. Y.
Oct. 1	The Committee of Twenty on Street and Outdoor Cleanliness, 2 East 103rd Street, New York City, have extended their prize contest for the design of a Litter Basket for New York City until October 1. First Prize $500.
October	The Department of Architecture of the University of New York will begin a series of lectures on "Promoting and Financing Building Projects."
Oct. 7-10	Annual convention of the Illuminating Engineering Society. Hotel John Marshall, Richmond, Va.
Oct. 8-12	Sixth National Conference of Church Architecture, Cleveland, Ohio.
Nov. 18-29	Art Exhibition, Royal Institute of British Architects, London (9, Conduit Street).
Dec. 1	Competition for "esthetic improvement" in design of water tanks, sponsored by Chicago Bridge and Iron Works. Albert M. Saxe, 430 N. Michigan Avenue, Chicago, architectural advisor.
April 18-25	Fourth Biennial Architectural and Allied Arts Exposition, Grand Central Palace, New York.

A NEW FEATURE—
ECONOMIC SURVEY OF THE BUILDING INDUSTRY IN THE RESIDENTIAL FIELD

With this issue the editors announce a new feature for THE RECORD—a series of articles giving monthly surveys of economic conditions relating to the building industry in general.

With the transitional changes in architecture there has come a corresponding change in the status of the architect himself. Apart from his artistic training he has become more and more a business man and a building specialist. The problems of specialization have made necessary a more intimate contact with business conditions. It is to satisfy and foster a demand for research data on current economic trends that this new department has been created in line with the editorial policy of furnishing the architectural profession with as much practicable information as possible. In view of the present period of depression and the decline of construction activity it is felt that such economic surveys will be very valuable to the individual architect in planning for the future.

The present study relates to the conditions within the *residential* field of construction because this field has witnessed the largest decline of activity within the past year. Subsequent articles will relate to conditions within the field of non-residential building and engineering. From time to time the price trends of materials and the prospective building outlook will be considered, together with labor conditions, in their bearing on the construction industry as a whole. This close study of changing trends will be featured with a view to providing the practicing architect with necessary information on the market for his services.

Statistics and charts will be based on figures compiled by the F. W. Dodge Corporation and will be interpreted in terms of building conditions by L. Seth Schnitman, chief statistician. Mr. Schnitman received his early training at the Sheffield Scientific School at Yale University and was formerly Chief of Division, SURVEY OF CURRENT BUSINESS, a publication devoted to current business and industrial statistics and published by the Department of Commerce at Washington since 1921.

WHAT METALS TO USE

(Continued from preceding page)

Monel, Allegheny, KA2, Ascoloy, Nirosta, 18-8, Stainless Steel, Duraluminum . . . What are these metals? What are their relative costs? What are their distinguishing qualities of color, ease of construction, permanency, and reaction to weathering? How can the architect distinguish and select among these metals for use on new building projects?

To answer these questions the research department of THE ARCHITECTURAL RECORD, in collaboration with engineers and manufacturers, has prepared a comprehensive chart giving the relative costs and characteristics of these new metallic materials. The chart appears on pages 206 and 207 of this issue.

RESTAURANTS

Restaurant planning, in the light of technical developments, has become today more highly specialized than ever before. Considerations of the class of patronage, the type of service offered and the return on the capital invested are all problems which must be considered and analyzed before the architect can even begin to present his ideas in sketches. A good architectural solution is conditioned by a complete analysis of the economic and social factors and the physical requirements of the particular establishment.

In this Technical News and Research study these problems are investigated; the results of the best practice are noted and the proper procedure indicated for the individual architect who is too busy with his practice to make an exhaustive research by himself. Equipment manufacturers and restaurant operators have been consulted in this study, and the latest trends observed. For instance, there is at present an increasing trend toward the lunch counter type of restaurant. Most existing counters are raised relatively high from the floor for ease in service but this necessitates a high counter stool. It has been found that women patrons, in particular, are averse to such an arrangement; the latest trend, it is pointed out, is to keep the counter at normal table level height, countersinking the floor behind the counter so that there may be no loss of service efficiency, and permitting the use of chairs instead of stools which thus appeals to the women patrons. Other similar developments in restaurant practice are also recorded.

Appended to the Technical News article is a check list of requirements which has been developed by the office of F. P. Platt and Brother, architects, and found from experience to be a satisfactory procedure.



THE OCTOBER ISSUE:

GLASS... a Technical News and Research study of the varied characteristics and physical properties of glass and how it may be used to best advantage in various types of construction.

HOW THE ARCHITECT MAY CULTIVATE BUSINESS... although architects do not openly solicit jobs, believing that meritorious work will induce new clients to accept their service, nevertheless there are methods of developing new business, systematically followed by successful offices, which may aid architects in increasing their practice.

PORTFOLIO OF BANKS... examples selected for their suitability to the chain bank, having similarity of treatment but with differences in plan.

DAYTON

Cog-Belts outlast any other V-belt ever built

In addition to exhaustive endurance tests under varied conditions of operation, production managers and factory superintendents are voluntarily reporting that Daytons outlast other V-Belts as much as three to one.

There are many reasons for the long life of Dayton Cog-Belts.

Dayton Cog-Belts are not moulded—they are laminated and are the only V-Belts that are die-cut in their finished state.

The Cog Section goes to the root of efficient V-Belt power transmission—the cog construction eliminates distortion in Dayton Belts even when used on pulleys of the smallest diameters.

The Central, "neutral axis," is the strength section—it is non-stretchable—built of cord fabric, pre-stretched under tremendous tension during the vulcanizing process—that's why Daytons stay permanently stretched—they are built that way, exclusively.

The outer section consists of a series of layers of bias cut fabric—it is fully flexible to accommodate the curve of the pulley without internal strain.

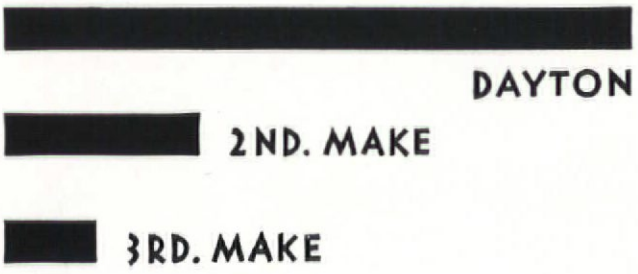
But get all the facts—complete information—about these long life, efficient V-Belts. Send for the Dayton Cog-Belt Catalog and a small section of the belt.

THE DAYTON RUBBER MANUFACTURING CO.
Dayton, Ohio

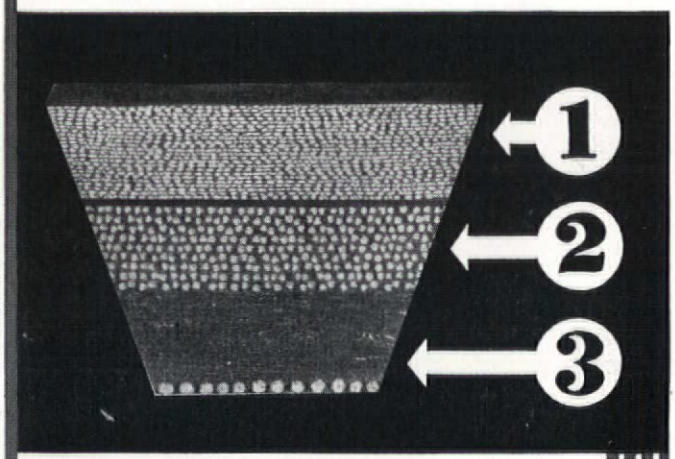
Factory Distributors in Principal Cities and all Westinghouse Electric and Manufacturing Company Sales Offices

Dayton COG-BELT DRIVES

ENDURANCE test of V-type belts

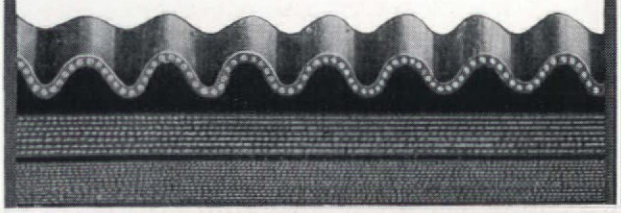


This chart shows the result of just one of the many life tests made by an independent Laboratory on a Norman V-Belt Test Machine. This machine was designed especially for the testing of V-Belts by one of the world's leading authorities on belt transmission. All tests as well as actual service operation show the same relative results.

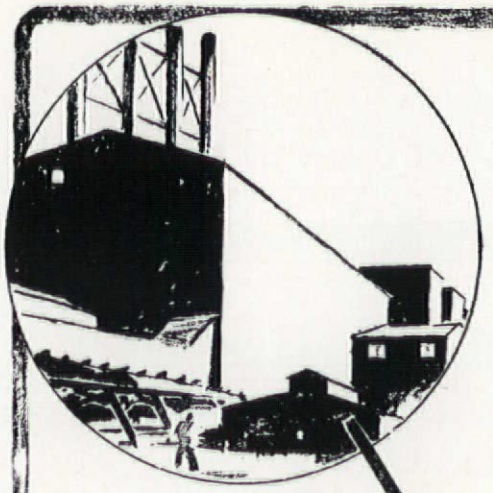


See how Dayton Cog-Belts are built!

1. OUTER SECTION
2. "NEUTRAL AXIS" Section
3. COG SECTION



Complete Drives—Pulleys and Belts—in stock—all ratios 2 H. P. to 100 H. P.



ANY MORNING

You need never be caught short of PARTITION TILE when you use GYPSTEEL

FREIGHT delays and the uncertainties of railway service don't mean a thing to you when you use Gypsteel Gypsum Partition Tile. Our fast trucks make daily deliveries from our plant at Linden, N. J. or warehouse in Newark, anywhere within the New York Metropolitan Area.

Your contractor can phone us in the morning and he'll get Gypsteel tile that afternoon or early the next day at the very latest.

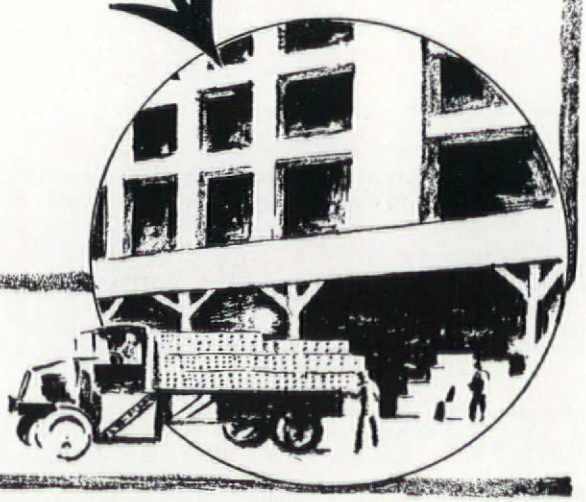
YOU CAN DEPEND ON IT!

Less Chipping and Breakage

AND when the tile arrives it will not be chipped and broken as much as you have come to expect of partition tile, because the Gypsteel Partition Tile is almost *three* times as strong as the standard specifications call for. This great strength of Gypsteel tile minimizes chipping and breaking, saving time and expense in setting up.

Our rapid delivery service and the great strength of Gypsteel Partition Tile are two of the numerous reasons why we are supplying so much of the partition tile being used today in the Metropolitan New York Area.

THAT AFTERNOON



STRUCTURAL GYPSUM CORPORATION
General Offices, LINDEN, N. J.
Linden 3700

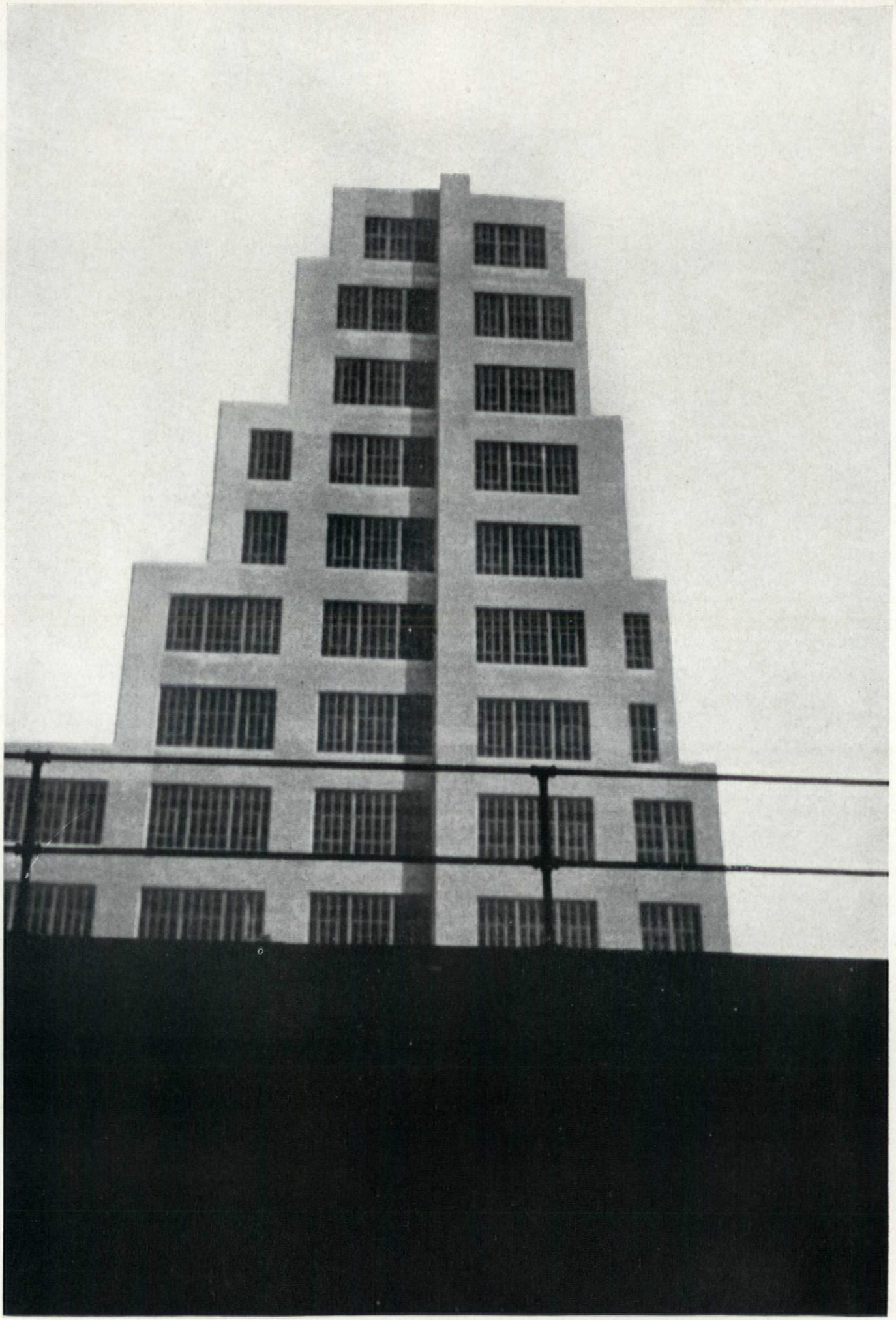
PHOTOGRAPHIC STUDIES

By WALKER EVANS









THE ARCHITECTURAL RECORD

AN ILLUSTRATED MONTHLY MAGAZINE OF ARCHITECTURE & THE ALLIED ARTS & CRAFTS

VOLUME 68 SEPTEMBER • 1930 NUMBER 3

A BUSINESS OFFICE RECEPTION ROOM

DESIGNED BY HOWARD T. FISHER

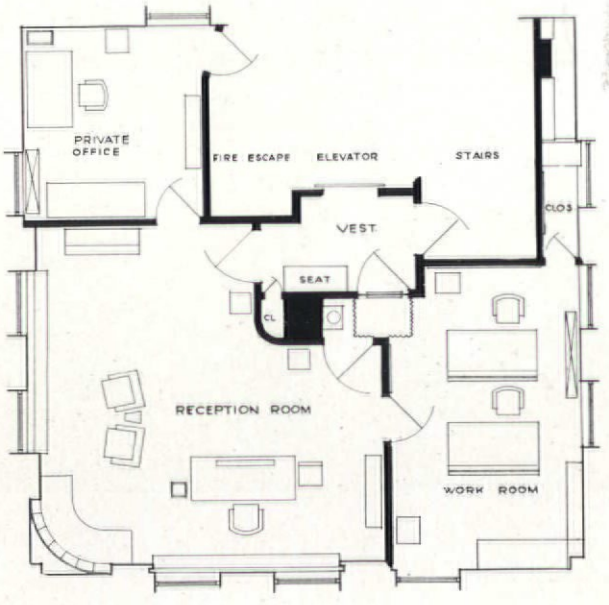
This main reception room for the Frances Hooper advertising agency occupies an entire floor in the tower of the Wrigley Building. The two large double windows open up to the southeast and southwest affording an excellent view both down the Chicago River toward Lake Michigan and up the river toward the city. The general shape of the room is in the form of an "L" with equal arms. The curve in the outer corner of the room is recalled at the reentrant angle of the opposite wall.

In order to cover certain exposed pipes it was necessary to fur out the walls, thus giving a sufficient window reveal to permit the installation of Venetian blinds in pockets. The two separate double-hung windows with which each outer wall of the room is equipped are here tied together into one composition by the use of a single blind running across the entire width of the two windows. The upright column in the center is treated with a fluted panel to reduce its conspicuousness to a minimum.

The radiator under each window is concealed in a wooden enclosure also running across the full width of the two windows. The top of this enclosure is used for plants.

In the outer corner of the room is a built-in curved bookcase. Because the building is somewhat out of square, this bookcase, as well as the seat in front of it, is elliptical rather than circular in form. The upright divisions in the bookcase are wedge-shaped, being thicker at the back than at the front. This results in the sides of each compartment being parallel and thus removing the usual disadvantages of curved bookcases.

The ceiling and walls—without superfluous cornices or moldings—are entirely covered with a polished aluminum foil applied in pieces approximately one foot square. The room as far as possible was laid out so that the joints in the aluminum foil line up with the squares of the bookcases and with the window openings. The aluminum foil is .00065" thick, polished, and mounted with an asphaltic binder on



OFFICE LAYOUT

WRIGLEY BUILDING, CHICAGO

30-pound bond paper. It is applied to the wall with ordinary paper-hangers' paste. The floor, also divided into approximate one-foot squares in the same manner as the ceiling, is made of *Nu-wood*, a wood-fibre insulating board ½" thick laid in the same manner as cork tile. Alternating squares were laid with the opposite side of the material turned up so as to give a slight checkerboard pattern. This material was painted black after its installation and treated with three coats of a cork lacquer. Such a floor will not stand severe usage.

Owing to the small size of the elevator giving access to this office, the large pieces of furniture had to be built in sections. The flat desk, for example, comes apart in three pieces, and the magazine rack and smaller desk come apart in two pieces, the line of division being frankly indicated. The tops of the radiator enclosures are also removable in case of repairs. A slight set-back at the base of all the larger pieces of furniture is also employed in the baseboard around the radiator enclosures.

The room is illuminated by two ceiling lights, each consisting of eight tubular 25-watt frosted counter light bulbs. To diffuse the light a piece of sand-blasted glass is suspended below them approximately 3" from the ceiling.

The flat top desk is equipped on each side with filing drawers at the bottom and smaller drawers above. In the middle is a large drawer of a size sufficient to take an unfolded newspaper.



Stone-Raymor

A BUSINESS OFFICE RECEPTION ROOM
WRIGLEY BUILDING, CHICAGO
HOWARD T. FISHER, DESIGNER

The large desk has a built-in light which can be shoved down into a position flush with the top of the desk when not in use.



The construction of the desk light consists of a trough reflector set behind a narrow strip of sand-blasted glass.

A BUSINESS OFFICE RECEPTION ROOM
WRIGLEY BUILDING, CHICAGO
HOWARD T. FISHER, DESIGNER



Hedrich-Blessing

A BUSINESS OFFICE RECEPTION ROOM
WRIGLEY BUILDING, CHICAGO
HOWARD T. FISHER, DESIGNER

All exposed woodwork is painted a bluish green.



Hedrich-Blessing

The fabrics repeat the color scheme of the woodwork.

A BUSINESS OFFICE RECEPTION ROOM
WRIGLEY BUILDING, CHICAGO
HOWARD T. FISHER, DESIGNER

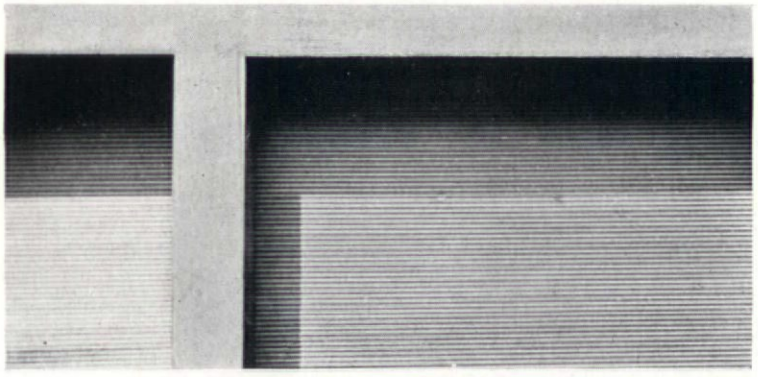


Hedrich-Blessing

A BUSINESS OFFICE RECEPTION ROOM
WRIGLEY BUILDING, CHICAGO
HOWARD T. FISHER, DESIGNER

The illumination of the small desk is by a trough reflector also set behind a piece of sand-blasted glass.





WHAT METALS TO USE

QUALITIES OF METALS FOR BUILDINGS*

MATERIAL	APPROXIMATE ESSENTIAL COMPOSITION [1]	APPROXIMATE PRICE PER LB.[4]	WEIGHT PER SQ. FT. 24 GA. (.025)	APPROXIMATE PRICE PER SQ. FT. 24 GA. (.025)	ORDINARY ATMOSPHERE	COLOR WHEN NEW	COLOR AFTER WEATHERING	SPECIAL WEATHERING CONDITIONS [5] Moist Sulphurous atmosphere
Aluminum (2s)	Al 99%	.348	.283	.087 .123	Surface film arrests further oxidation	Obtainable polished or oxidized gray finish	Loses some reflectivity with age	Recommended
Duralumin (17st)	Al 92% Cu 4% Mg 0.5% Mn 0.5%	.62	.283	.225	" "	" "	Darkens with age	Can be used if protected
Aluminum-Silicon (43s)	Al 92.5% 5.0%	.348	.283	.12	" "	" "	" "	Recommended
Brass (red)	Cu 85% Zn 15%	.19	1.1376	.216	Surface film of oxidation and intercrystalin corrosion	Polished or dull finish	Turns green	Recommended by manufacturers
Brass (yellow)	Cu 70% Zn 30%	.18	1.0908	.196	" "	" "	" "	Limited use recommended
Bronze	Cu 89% Zn 9% PB 2%	.183	1.1484	.21	Surface film prevents further corrosion	" "	" "	Recommended by manufacturers
Copper	98% Cu	.174	1.152	.20	" "	" "	" "	Recommended
Everdur	Cu 95% Si 4% Mn 1%	.30	1.1016	.33	" "	" "	" "	" "
(Stainless Steel or Iron) 1. Chronium Steel	Cr 15-18% C under 0.10%	.285	1.008	.287	" "	" "	Will discolor unless highly polished	Recommended by manufacturers
2. Chronium Nickel Steel 18&8	Cr 18% Ni 8% under 0.15%	.36	1.0224	.368	No visible surface film	" "	Remains bright if polished; highly resistant in other finishes	" "
German Silver	Cu 65% Ni 18% Zn 17%	.29	1.1376	.329	Surface film prevents further oxidation	" "	Green cast	" "
Monel Metal	Ni 68% Cu 29% balance Mn C, Si and Fe	.46	1.152	.468	" "	" "	Mottled green, brown and black	Widely used
Nickel	99% Ni plus Mn and C	.56	1.152	.568	" "	" "	" "	Used in special cases
Zinc	99% Zn	.095	.9108	.123	" "	Gray	Dull Gray	Not recommended
Zilloy	4% Al, 3% Cu Balance Zn	.102	.130	.133	" "	Gray	Battleship gray	Recommended

[2] TRADE NAMES ON STAINLESS STEEL OR IRON

Chromium Steel

Ascoloy No. 66
Carpenter No. 3, 5
Delhi A
Duraloy B
Enduro A A
Lesco M
Special Defirust
Stainless Iron 2, 18
Stainless M
Untiloy 1409, 1609
U. S. S. Chromium Steel 16-18

Allegheny Steel Company
Carpenter Steel Company
Associated Alloy Steel Company
Duraloy Company
Republic Steel Corporation
Latrobe Electric Steel Company
Rustless Iron Corporation of America
Crucible Steel Company of America
Firth-Sterling Steel Company
Universal Steel Company

U. S. Steel Corporation

Chronium Nickel Steel 18 and 8

Allegheny Metal
Carpenter No. 4
Defistain
Duraloy 18-8
Enduro Nirosta
Lesco 18-8
Midvale V1A
Nickel Steel 18-8
Nirosta KA-1
Rezistal KA-1
Stainless N
Stainless U
Sterling Nirosta
U. S. S. Chromium

Allegheny Steel Corp.
Carpenter Steel Company
Rustless Iron Corporation of America
Duraloy
Republic Steel Corporation
Latrobe Electric
Midvale Company
U. S. Steel Corporation
Associated Alloy Steel Company
Crucible Steel Co. of America
Colonial Steel Company
Colonial Steel Company
Firth-Sterling Company
U. S. Steel Corporation

Other Metals

Everdur
Monel Metal
Zilloy

The American Brass Company
International Nickel Co.
New Jersey Zinc Sales Co.

QUALITIES OF METALS FOR BUILDINGS

SPECIAL WEATHERING CONDITIONS [5] Sea Water	FORMS AVAILABLE [6]	METHODS OF FABRICATION [7]	WEIGHT IN LBS. PER CU. INCH	MEAN COEFFICIENT OF THERMAL EXPANSION 32°-212° F.	MELTING POINT DEGREES F.	ULTIMATE STRENGTH IN LBS. PER SQ. IN.	YIELD POINT LBS. PER SQ. IN.	APPROXIMATE REDUCTION OF CROSS-SECTION AREA IN TENSION TEST	ELONGATION %
Recommended for special uses	All except Fr	DD, F, R, W, SP	.098	.0000133	1215	12,000 to 30,000	4,000 to 25,000		40 to 5
Can be used if protected	All Except C	DD, F, R, W	.101	.0000123	1193	50,000 to 63,000	25,000 to 40,000		25 to 16
Recommended for special uses	All except Fr and SMP	DD, F, R, W, SP	.096	.0000122	1180	17,000 to 22,000	8,000 to 16,000		25 to 3
Recommended by manufacturers	B, CR, D, S, T, W	All	.316	.0000104	1875	43,000 to 75,000	25,000 to 50,000	5 to 60%	4 to 47
Limited use recommended	B, CR, D, S, T, W	All	.303	.0000096	1800	40,000	10,000	50%	35
Recommended by manufacturers	All	SS	.319	.0000101	1920	35,000 to 60,000	12,000	5 to 40%	3 to 35
Recommended	B, CR, D, HR, S, T, W	All	.32	.0000088	1980	35,000 to 55,000	24,000 to 44,000	60 to 70%	5 to 35
" "	All	All	.306	.00000944	1830	50,000 to 145,000	20,000 to 95,000	30 to 80%	5 to 50
Recommended by manufacturers	All	DD, F, R, SS, W	.280	.0000061	2700	80,000 to 150,000	45,000 to 110,000	40 to 60%	15 to 30
" "	All	DD, F, R, W, SS, SP	.284	.0000090	2550	80,000 to 120,000	40,000 to 60,000	55 to 70%	45 to 60
" "	B, CR, D, S, W	All	.316	.0000102	2030	55,000 to 100,000			2 to 50
" "	B, CR, D, HR, S, T, W	All	.320	.000014	2460	65,000 to 140,000	35,000 to 125,000	30 to 75%	Up to 50
" "	All	All	.320	.000014	2640	65,000 to 115,000	20,000 to 100,000	30 to 75%	Up to 53
Not recommended	C, S	F, R, SS	.253	.000014	786	30,000 to 40,000			15 to 35
Not recommended	C, S	F, R, SS	.256	.000033	787	45,000 to about 65,000			

[1] Al Aluminum
C Carbon
Cr Chromium
Cu Copper
Fe Iron
Mg Magnesium
Mn Manganese
Ni Nickel
Pb Lead
Si Silicon
Sn Tin
Zn Zinc

[4] *Prices:* The prices quoted are approximately correct at this time, with variations, depending on size of job, location, market conditions, and quantity.

[5] *Caution:* Danger of Electrolytic Action. The reaction of wrong combinations of metals is well illustrated by the common galvanic cell, using copper and zinc electrodes. Metals of opposite electrical poles will react in a similar way. Possibility of formation of galvanic couples necessitates special study in order to avoid trouble, especially where there is any problem of moisture.

[6] *Key to Abbreviations*
Available forms:—
B — Bar
C — Castings
CR — Cold-rolled
D — Drawn
Fr — Forgings
HR — Hot-rolled
S — Sheets
T — Tubing
W — Wire
ES — Extruded shapes
SMP— Screw machine products

[7] *Fabrication Methods:*
DD — Deep drawing
F — Flanging
R — Riveting
SS — Soft soldering
W — Welding
SP — Spinning

*Much of the data used is from the table which appeared in the September, 1929, issue of the Chemical-Metallurgical Engineering Journal.

Aluminum and Duralumin. Originally "duralumin" referred to the alloy invented by Alfred Wilm, but it is now more or less generally used for all of the strong aluminum alloys. These alloys include 17ST, 51ST, and 25ST. They are all wrought alloys, like the original duralumin. Most aluminum ornamental work is done in the aluminum silicon alloy No. 43.

The natural finish of aluminum is that of silver with a bluish cast. However, there is a slight difference in the color of the different products, depending upon the method by which they are made. On polishing an aluminum surface, the tinge of blue becomes more pronounced, and the surface has a greater reflectivity for light. Sand-blasting reduces the reflectivity of the surface, and produces a finish similar to that of etched glass. A carborundum blast gives a darker shade of gray, since in this operation small particles of acarborundum are deposited on the aluminum. A satin finish is obtained by wire-brushing the surface or rubbing it with an emery cloth. A polished surface will remain brighter much longer than a rough or "as cast" surface, since the dust and dirt in the air cannot collect on it as easily.

Artificial shades of gray may be produced by deplating products made from the aluminum-silicon alloys. In this deplating by electrolysis, aluminum is removed from the surface and silicon particles are left exposed. Since oxygen forms at the anode, the surface of the piece being deplated is oxidized. By varying the current densities and time, different shades of gray may be obtained.

Bronze and Red Brass. These alloys, which are of compositions widely available according to properties desired, have long been used, and their applications are well known, consisting principally of ornamental trim.

Copper. When copper is first erected, it is a distinctive reddish color. This darkens until the metal becomes a grayish black. After a period of time, it changes to a gray-green which is characteristic of the weathered metal.

This slight surface corrosion is governed by atmospheric conditions. Near the seacoast this change comes about within a year or two. In manufacturing centers the copper frequently remains black for a number of years before the change to gray-green patina is complete. This is due to small amounts of sulphur gases in industrial atmosphere. Away from salt air and manufacturing centers, this change is very slow. In these regions it is often desirable to color copper artificially.

Everdur. This is a relatively new copper-bearing alloy, originated and now being developed by the American Brass Company. It has excellent corrosion-resisting properties. Its composition is approximately 95% copper, 4% silicon, and 1% manganese. In weathering it takes on the gray-green patina of copper on bronze.

Nickel Silver Alloy (German Silver). This is a white metal available in several analyses, one of which is 65% copper, 18% nickel, 17% zinc. It is an attractive looking metal but requires much attention to keep it so.

Nickel. This metal requires frequent polishing to keep it bright. Applied as solid metal, it is probably more permanent than copper.

Monel Metal. A white metal 68% nickel, 29% copper, and balance manganese, carbon, silicon and iron. It is excellent for interior applications of great variety, and has been successfully used on exteriors. Owing to the copper content this metal will weather to a mottled gray-green brown.

Stainless Steel, Stainless Iron or Rustless Steel.

1. *Chromium Steel.* For interior work, a stainless material known simply as stainless iron or steel has been found eminently satisfactory and has been extensively used in bank vaults. Its lower price is an important factor in its selection. When strength rather than perfect corrosion resistance is desired, a lower chrome type (11 to 14% chrome) is available.

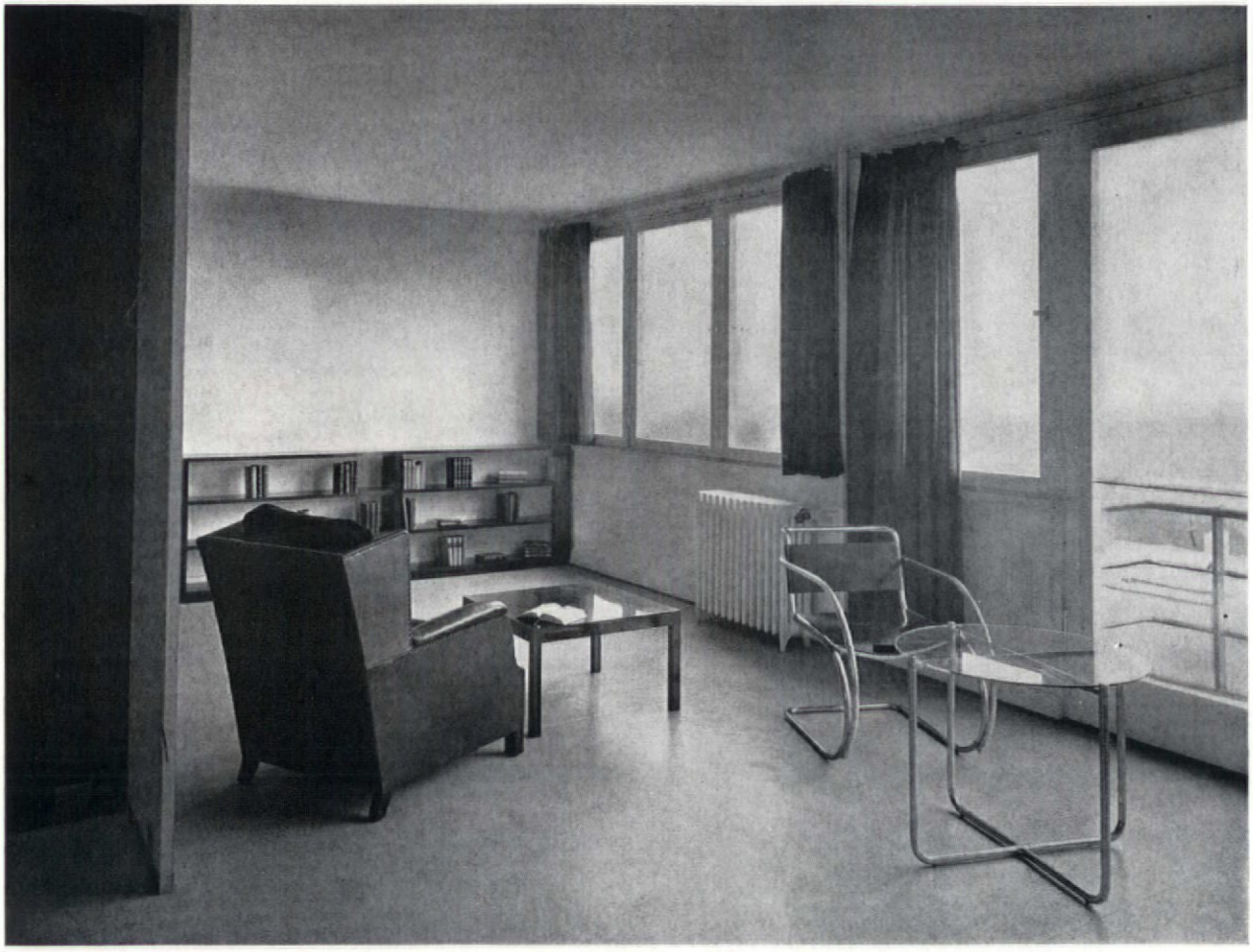
2. *Chromium Nickel Steel* (Eighteen and Eight). For external use, the different types of this material have narrowed down to alloys, chiefly iron with high chromium content plus nickel as the preferred composition suitable to meet conditions required. The metal now generally manufactured and recommended is available under a long list of trade names (see chart). It contains 18% chromium and 8% nickel, with the balance chiefly iron, and is known to steel makers as "Eighteen-Eight." It resists ordinary corrosion, remaining bright for a long period of time. The maintenance factor is practically eliminated.

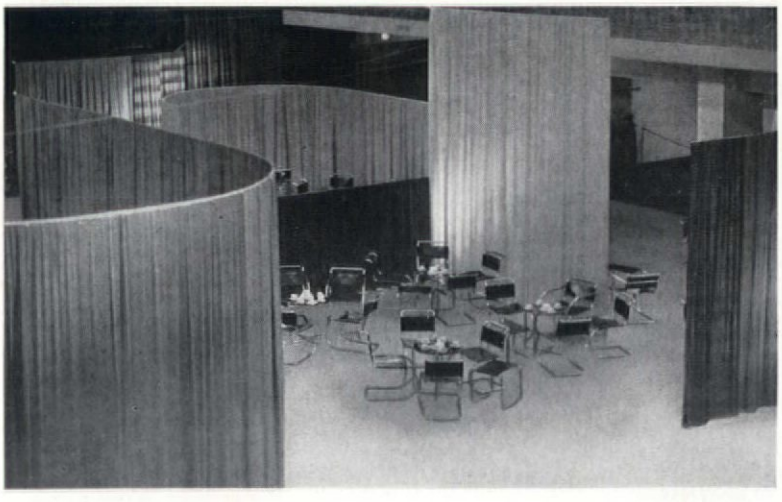
Steel: Galvanized, Schope and Other Protective Coatings. Zinc-coated (galvanized) steel sheets have become tonnage material for industrial buildings but require considerable maintenance, and unfortunately have a life of only a few years. It is felt that improved quality is possible and could be furnished if a demand were created. Steel is sometimes protected by spraying on a surface of molten zinc during the process of manufacture. (An eight-story metal-walled building in Holland by Van Der Vlugt uses this finish.)

Enameled Steel. Porcelain enamel may be applied to sheet steel or other types of sheet metal. It may be applied in all colors, and will not be affected by weathering except in a moist sulphurous atmosphere where special acid-resisting enamel should be used.

Zinc. This metal weathers to a battleship gray. It is interesting for its stability of surface and, when strength is not a factor, this property together with its low price and possibility of contrasting effects should command favorable attention. Zilloy is an alloy of 93% zinc, 4% aluminum, and 3% copper.

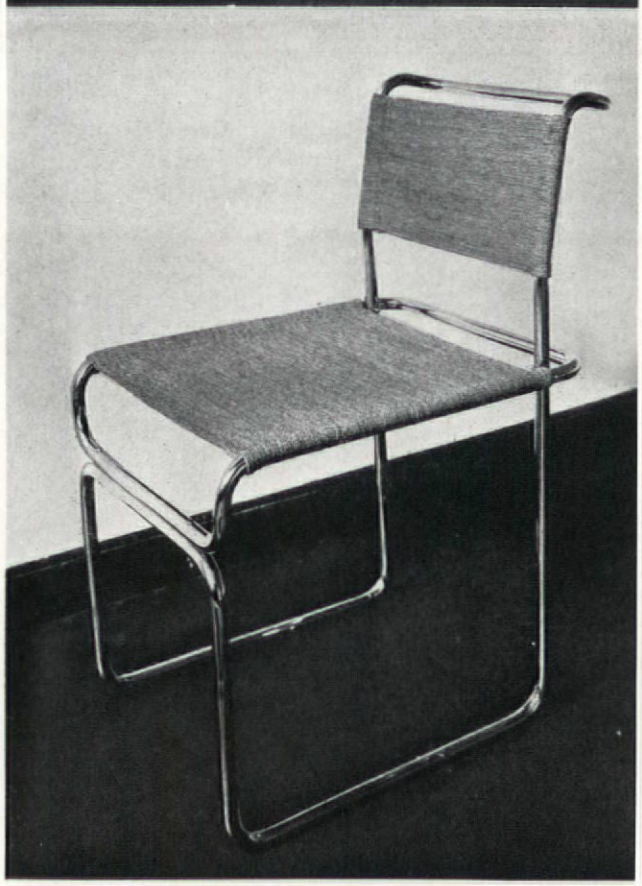
METAL CHAIRS





DESIGNED BY MIES VAN DER ROHE
BERLIN, 1927



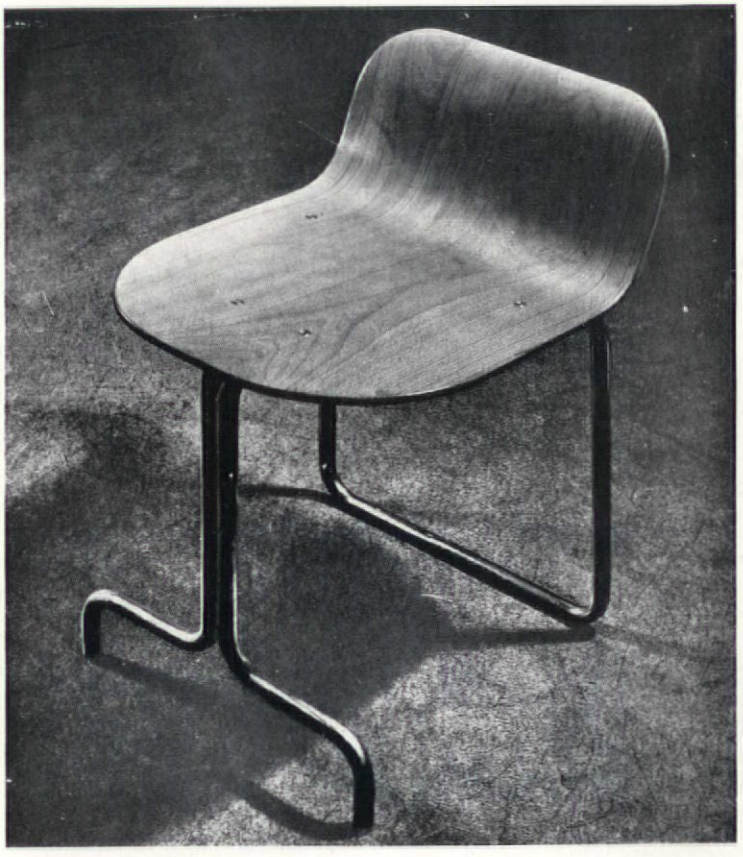




DESIGN MARCEL BREUER
BAUHAUS DESSAU, 1926



WORK CHAIR
DESIGN BAUHAUS DESSAU
1929



KITCHEN STOOL
DESIGN BAUHAUS DESSAU
1929





DESIGN LE CORBUSIER, JEANNERET, PERRIAND PARIS, 1929





DESIGN LE CORBUSIER, JEANNERET, PERRIAND
PARIS, 1929





AIRPLANE CHAIRS

FORD MOTOR COMPANY



Sigurd Fischer

Window display contributes to selling of merchandise. Goods and the architectural setting are coordinated, illustrating the close tie-up between selling and display.

SHOP WINDOW DISPLAYS

SAKS AND COMPANY
NEW YORK CITY

F. J. KIESLER
DESIGNER



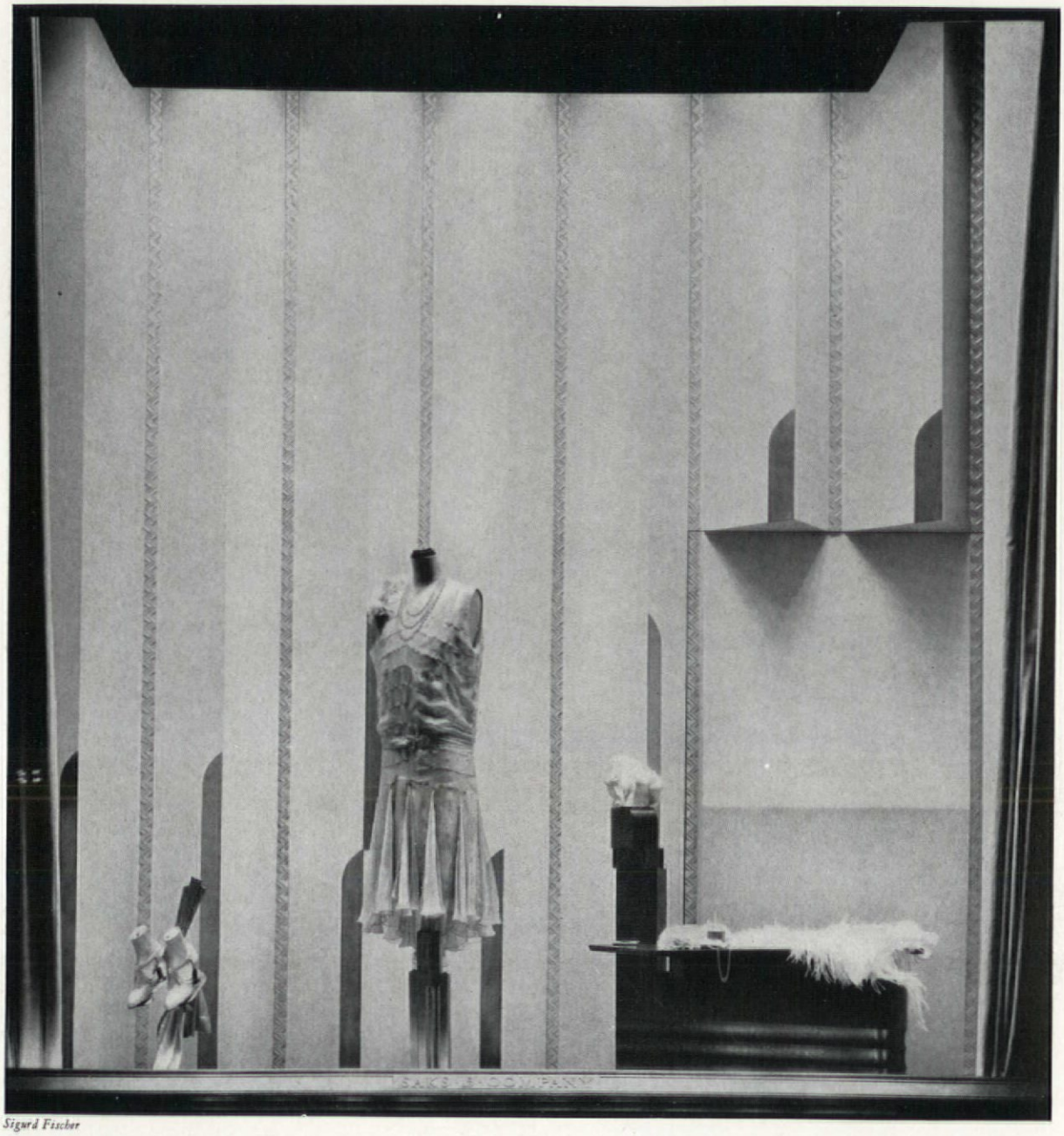
Sigurd Fischer

WINDOW DISPLAY
SAKS AND CO., NEW YORK CITY
F. J. KIESLER, DESIGNER



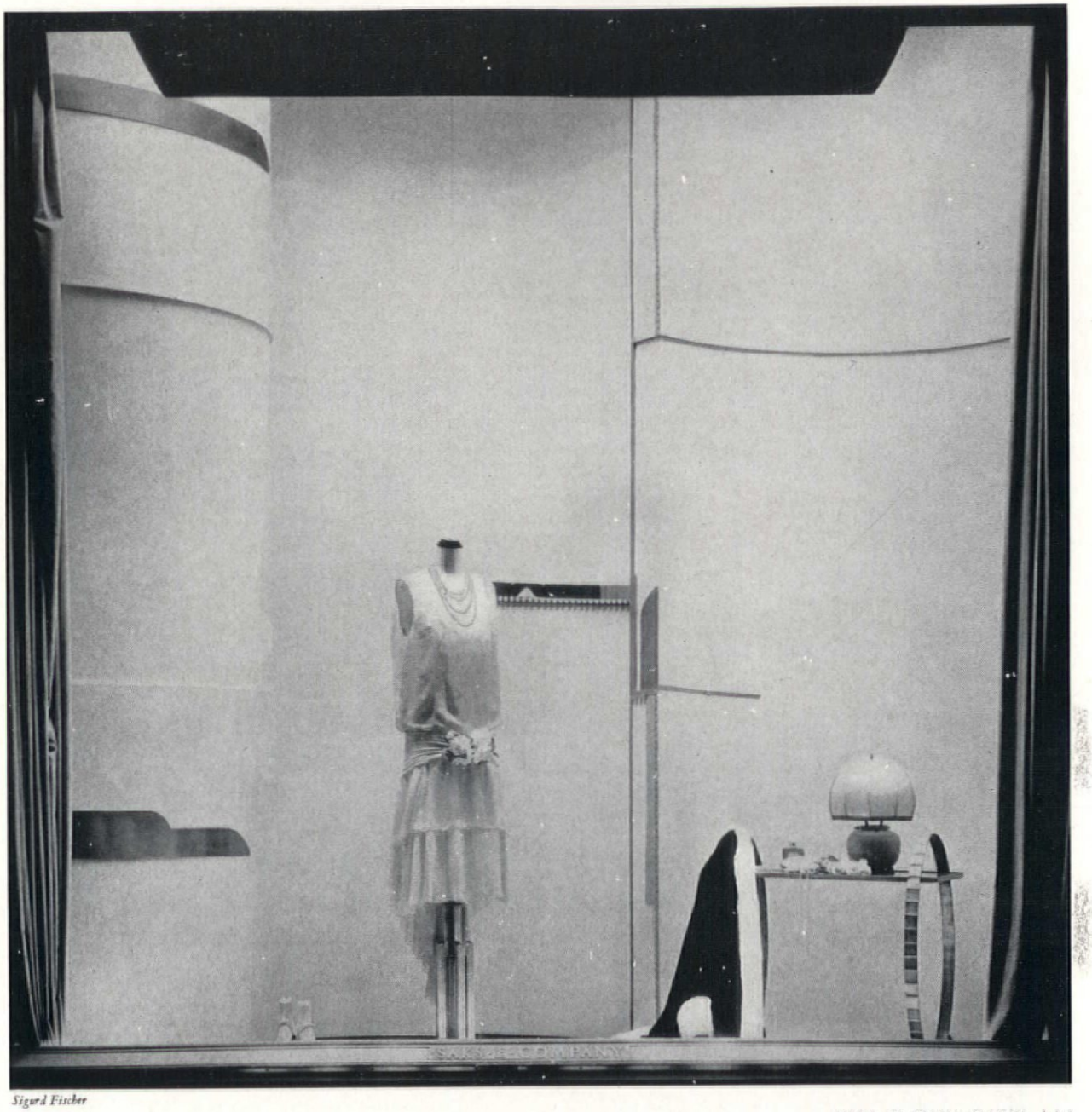
Sigurd Fischer

WINDOW DISPLAY
SAKS AND CO., NEW YORK CITY
F. J. KIESLER, DESIGNER



Sigurd Fischer

WINDOW DISPLAY
SAKS AND CO., NEW YORK CITY
F. J. KIESLER, DESIGNER



Sigurd Fischer

WINDOW DISPLAY
SAKS AND CO., NEW YORK CITY
F. J. KIESLER, DESIGNER

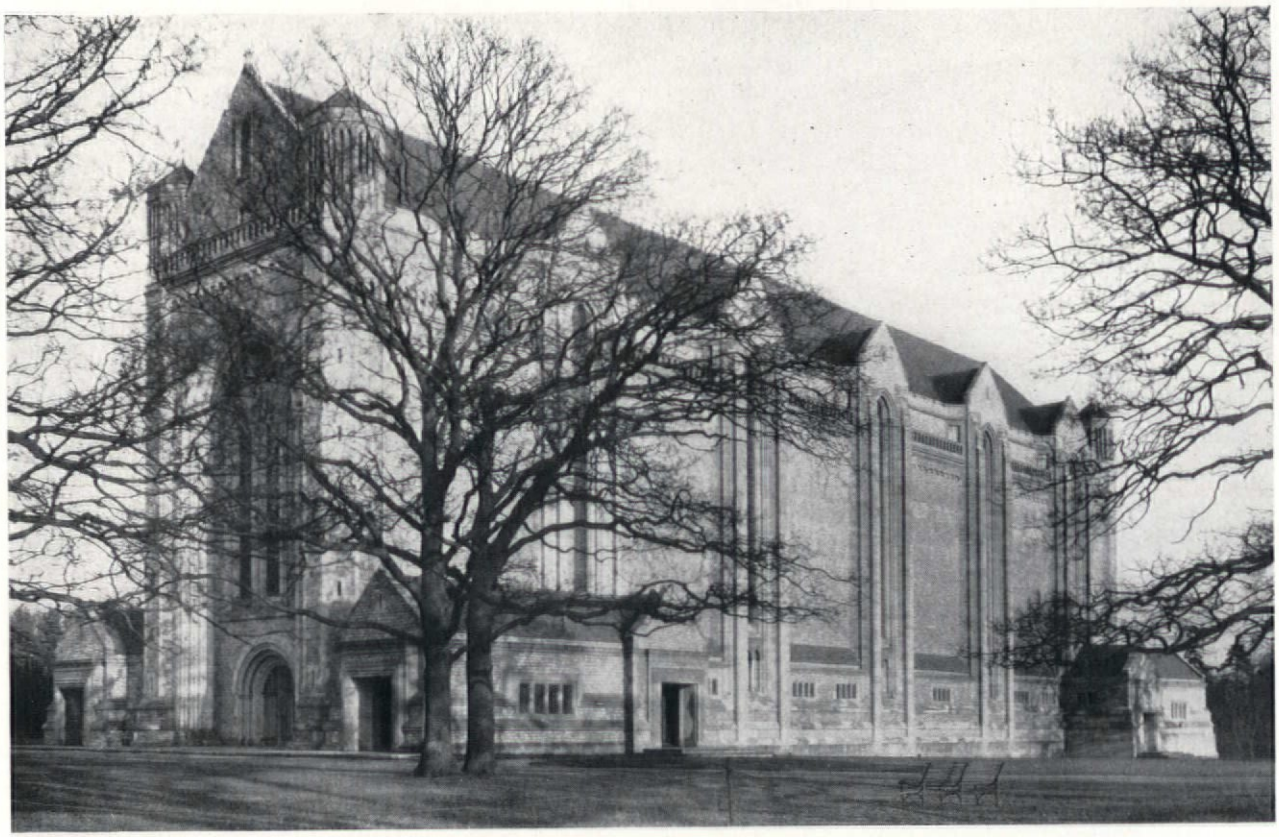
INTERIOR DISPLAYS
SAKS AND COMPANY
NEW YORK CITY

WALTER F. MARCH
DESIGNER





Peyser & Patzig



South Side and West Front

THE NEW CHARTERHOUSE CHAPEL

SURREY, ENGLAND

GILES GILBERT SCOTT, ARCHITECT

The new chapel of the Charterhouse School, at Godalming in Surrey, is a memorial to Carthusians who fell in the War.

The total interior length of the chapel is 190′, the width 43′, and the height from the floor to the crowns of the transverse arches 62′. The five great lancet windows on each side, whose tops are carried up into the vaulting, are 38′ high and 3′ 3″ wide.

The exterior walls are faced with Bargate stone of a light tawny cream. The roof is covered with handmade sand-faced tiles of a warm grayish hue. Inside the walls and vaulted roof are plastered and also tinted a warm cream.

The altar and the reredos are made of the brown Hornton stone which comes from the neighborhood of Banbury. The organs, galleried out from opposite sides of the chapel, occupy one bay near the east end. At the west end, a stone screen, which extends as high as the tops of the stall canopies, forms a shallow ante-chapel which is in reality only a passageway. The outer side of this screen is inscribed with the names and years of all the old Carthusians in whose memory the chapel is built. The inner side is lined with canopied stalls. All the woodwork in the chapel is of oak, devoid of dressing.

The head master of Charterhouse calls attention to certain considerations: "A school chapel differs both in use and origin from an ordinary church, and its architecture is conditioned by the difference. It has a uniform congregation. . . . A parish

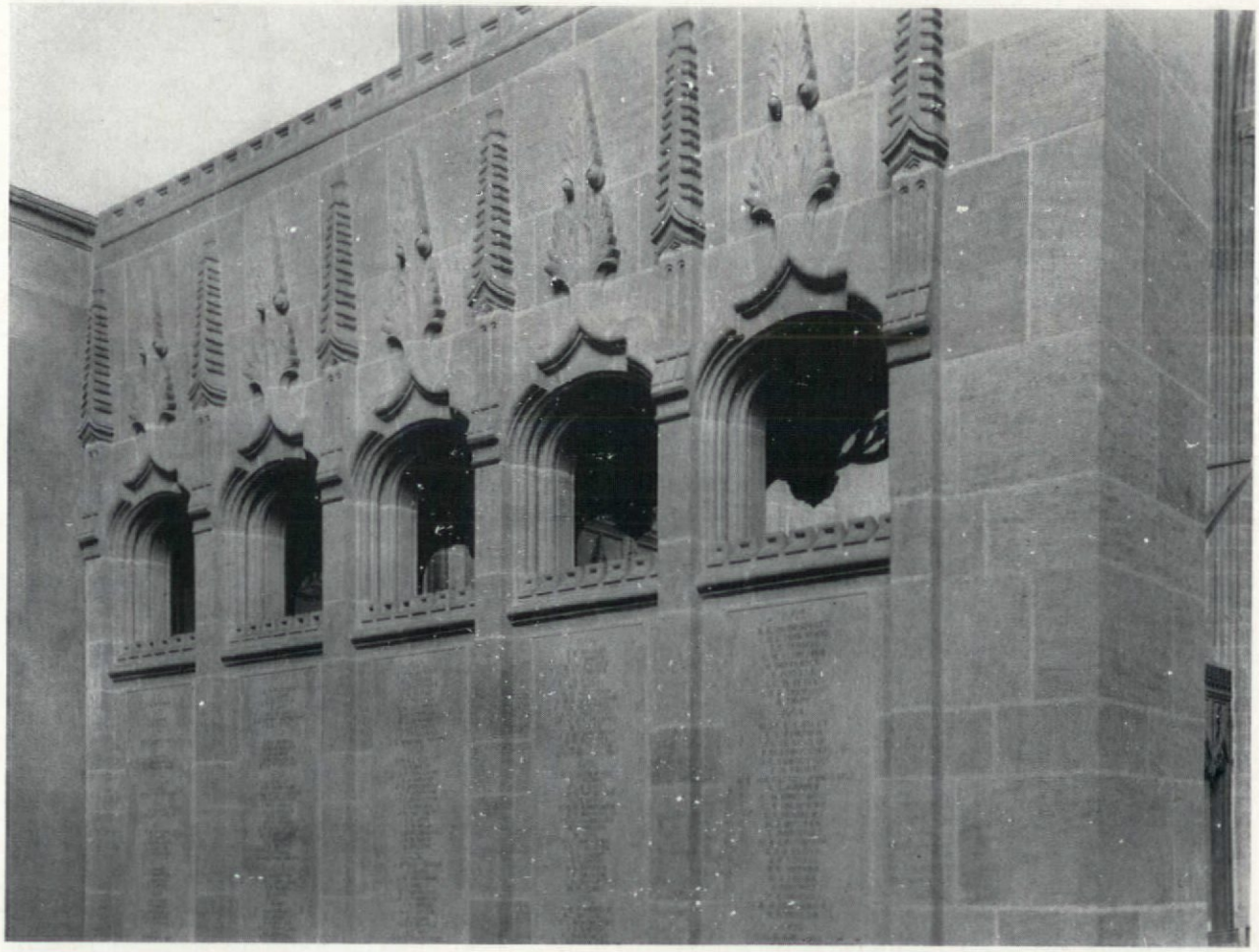
church has a larger constituency than a school chapel, but in actual experience it never gathers them all together. A school chapel will be filled daily; a school of six hundred boys needs a larger building than a town with a population of thousands."

The proportion of wall surface is vastly in excess of the window area. The tall lancet windows are set well back from the interior wall surface so that on looking up the chapel from the west end no windows are visible, except the east window which carries the eye at once to the altar and reredos.

The fenestration gives complete adequacy of lighting within a relatively small glass area. Small subsidiary windows penetrate the walls at the sides of the chapel just above the stalls. The lancet window tops extending well up into the vaulting necessitate a dormer treatment.

Five great buttresses, or pairs of buttresses, divide each side into six bays. These rib-like coupled buttresses that articulate the exterior are patently fresh creations. The architect has drawn upon the storehouse of precedent only to call into being something wholly fresh. He has used precedent as a servant.

HAROLD DONALDSON EBERLEIN



NEW CHARTERHOUSE CHAPEL
GODALMING, SURREY
GILES GILBERT SCOTT, ARCHITECT

West Screen



West End

NEW CHARTERHOUSE CHAPEL
GODALMING, SURREY
GILES GILBERT SCOTT, ARCHITECT



NEW CHARTERHOUSE CHAPEL
GODALMING, SURREY
GILES GILBERT SCOTT, ARCHITECT

Southeast Porch



West Door

NEW CHARTERHOUSE CHAPEL
GODALMING, SURREY
GILES GILBERT SCOTT, ARCHITECT

WORKING SCHEDULE FOR DRAFTSMEN

How long should be the working week or the working day? What about summer schedules? Does the architect-employer also gain by "Saturdays off"? . . . . . .

"Saturdays off" for draftsmen during summer months is commonly accepted by architectural firms not only for convenience to the office force but because there is "better morale with no loss in performance." In a survey that was limited to investigation of fifty offices in scattered parts of the country, information was obtained on:

1. Hours of employment during summer and remainder of year;
2. Whether or not office work was done on Saturday;
3. Advantage or disadvantage of system.

Ninety-six per cent of offices reporting do not work during summer more than five of the seven week days. The Saturday loss in summer is usually compensated by longer working hours. In most cases, the reduced time is applied to June, July and August, but in four instances September is included. Two offices close on Saturday throughout the year, the force working until ten o'clock p. m. on each Thursday. Total working hours during the week vary from 39 to 45 hours during winter and from 35 to 45 hours during summer.

The following are representative schedules to which comment by a member of the firm is added.

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Total
Summer	7¾	7¾	7¾	7¾	7¾	0	38¾
Other Seasons	7	7	7	7	7	4	39

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Total
Summer	8	8	8	8	8	0	40
Other Seasons	7½	7½	7½	7½	7½	4	41½

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Total
Summer	7¾	7¾	7¾	7¾	7¾	0	38¾
Other Seasons	7	7	7	7	7	4	39

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Total
Summer	7	7	7	7	7	0	35
Other Seasons	7	7	7	7	7	3½	38½

Comment of Firm: "We consider it an advantage to close the office on Saturday during June, July and August. The time is made up on a 'gentleman's agreement.' "

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Total
Summer	7	7	7	7	7	0	35
Other Seasons	7	7	7	7	7	4	39

Comment:

"We all get more time off and can work better while here. The acceptance of the five-day week by the building industry, and the surprising sight of a skyscraper standing silent on Saturday, has pushed things further toward Mr. Ford's five-day week, and I think it will gradually come to most business and professions."

Comment:

"During June, July, August and September our office is closed all day Saturday except for attendance to cover special messages, etc., and the staff works a sufficient time on the other five days of the week to make up for Saturday closing. The advantage of this arrangement is that the time put in on the five week-days during the months when we are closed for Saturdays is much more efficiently used than was the case when the office was open on Saturday mornings during summer months, because during those summer months there was a much reduced attendance of those who should be at the office and a good deal of lost time due to plans to get away."

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Total
Summer	7½	7½	7½	7½	7½	0	37½
Other Seasons	7	7	7	7	7	3	38

Comment:

"We have made a practice of closing our office on Saturday during the four summer

months for the last six years and find it has worked out most satisfactorily in every way. We find that efficiency and the amount of work accomplished are greater, rather than less."

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Total
Summer	7	7	7	11	7	0	39
Other Seasons	7	7	7	11	7	0*	39

Comment:

*"On Thursday nights we work until 10:00 P. M. and take Saturday off the year round."

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Total
Summer	8	8	8	8	7	0	39
Other Seasons	7	7	7	7	7	4	39

Comment:

"All my men like this summer schedule (9 a. m. to 6 p. m. during summer) as it gives them long week-ends. None of my clients comes into the office on Saturdays and most contractors now don't work on Saturdays, so it is no inconvenience to anyone."

Comment:

"If we are not busy draftsman works until 5 and we charge his 4 hours for Saturday against him and when we are busy he makes this up in overtime. Eight hours a day for a draftsman is about his limit without his becoming overtired, and a man can work for 10 hours a day for about two weeks but he is then too tired to continue this schedule for the following week, when we work one night and close at 5 the next alternating and so on."

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Total
Summer	7½	7½	7½	7½	7½	0	37½
Other Seasons	7½	7½	7½	7½	7½	3½	41

Comment:

"I believe the half-day Saturday in summer is useless so far as the office is concerned—the men come in late and get away as early as possible, and the intervening time is spent getting ready to go, or thinking about it. Moreover, the full day Saturday and Sunday keep the men fresher during the Summer months."

Other Comments:

"In order to live most people must work. I am not in favor of any five-day week with six days' pay at the present stage of our economic development. I always worked six or seven days a week and three or four evenings also, and I still do this. A good deal of my success—such as it is—I attribute to my willingness to work while the other fellows were wasting time playing.

"It's very easy for the men to take holidays at the Boss' expense. I notice, however, where men are on a time basis and take holidays at their own expense, they don't take them.

"Working longer hours during the week and taking Saturdays off is not satisfactory as far as the employer is concerned and I've talked to a number who have tried it. It comes down to a reduction in hours of work per week at the same pay and is at the expense of the employer 100%.

"The men start to think of their holidays now on Friday afternoon even when they work Saturday. If they shouldn't work Saturday they would try and get away Friday and begin thinking about it Thursday.

"I treat my men fairly—they get two weeks' vacation (I didn't take one for many years); they are paid when they are sick; they are paid time and one-half for overtime. Sometimes they are sick a day or two one week and the next week they work a few hours' overtime and expect to be paid for it.

"Have a heart for the Boss—someone must work besides him in order to pay rent and salaries. The trend of the time is to avoid work as much as possible—we have forgotten the example of our forefathers. Nothing worth while was ever accomplished without work and thrift instead of making a bad situation worse. The reason we have gunmen and bandits is because men want easy money and are not willing to work for it.

"To sum up—less work is accomplished by working longer hours early in the week

and taking Saturdays off than by working regular hours and also on Saturday. Saturdays off are taken at the expense of the Boss and are another added expense."

Comment:

"It has long been our custom to close the office Saturday mornings in summer time, starting the first of July and ending the first Saturday after Labor Day. However, we usually make up the time by working until 5:30 on week days. We have found that more work is accomplished by working until 5:30 than by working on Saturday, and we feel that it is more equitable to our employees to permit them to take Saturday off when many times the executives take the Saturdays off. It is a better working organization than coming in Saturdays for one-half day.

"In the winter time I feel that the demands of our clients are better met by working on Saturdays."

Comment:

"It has been our custom during the last few years to adopt the Saturday-closing plan during the months of June, July and August. It is the plan in this office to make up the time lost on Saturday morning by having the draftsmen work the requisite number of hours Tuesday night of each week. We find that this works out very much better than by increasing each day's work by an hour or so.

SUMMER VACATION

The office of Frederick L. Ackerman solved to their own satisfaction the summer vacation which often is spread over several months with consequent disorganization. "Last summer," writes Mr. Ackerman, "we inaugurated a new system for summer vacations which we thought would serve our office and our clients in a better manner. The one summer's experience was quite satisfactory and will probably be continued until something better is offered.

"We notified our clients, jobs under construction, and others interested, that the office would be closed for a period of two weeks starting on a given date. At this time all went on their vacations except one or two who were here to take care of jobs in progress. The office was officially closed, but open enough to take care of new work and contingencies. In other words, a skeleton force remained.

"This system has its advantages insofar as there is not a continual shifting of duties in the office during the summer and outsiders are not disappointed in finding certain members of the staff away. Any disappointments that come, come all at once at a definite stated time. It also simplifies the allotment of periods for vacations as no one feels that they are going away at a more advantageous time than others."

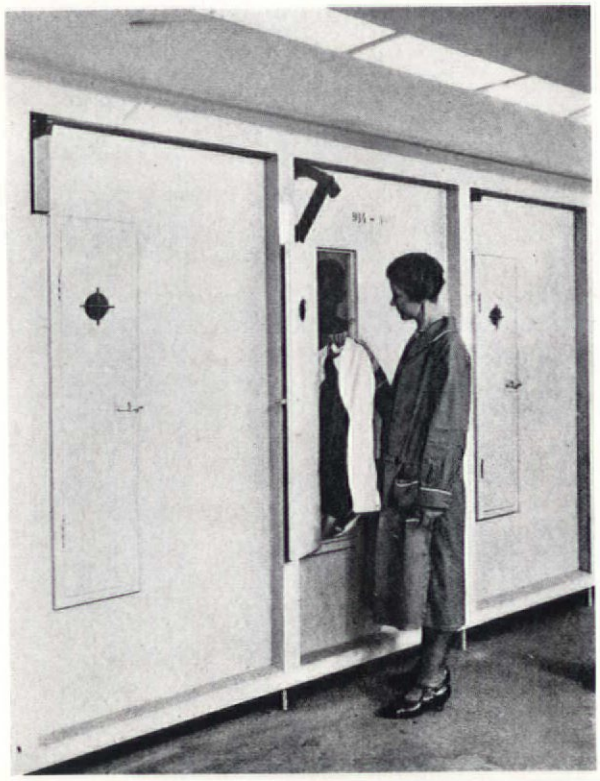


Thousands of dressing rooms at Coney Island beach cover more than two acres of ground space. (See following page for simplified dressing room planning.)

NOTES ON DRAFTING AND DESIGN

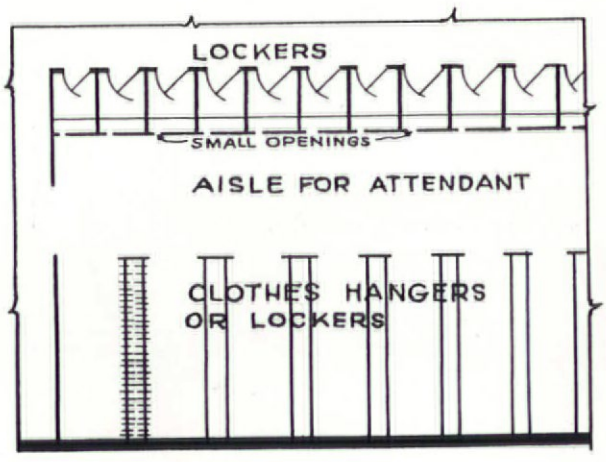
REDUCE DRESSING ROOMS

Dressing rooms may be reduced in number by an improved method recently devised for a beach bathhouse near Berlin. Instead of providing a separate dressing room for each bather, as is the case at most beaches, a limited number of rooms are built with small lockers or hangers adjoining these dressing rooms. The occupant of a dressing room passes clothes and valuables to an attendant through a small opening at the rear of the dressing room. The bather is given a number tag that slips over the wrist. The attendant places the clothes in a numbered locker or on a hanger. When the dressing room is vacated it is ready for use by another person. Clothes are watched by the attendant with responsibility for loss by the management. With this method 40 dressing rooms may do the service of 800, and there is a considerable saving in construction cost and space. Also dressing rooms may be made more convenient because of their limited area.



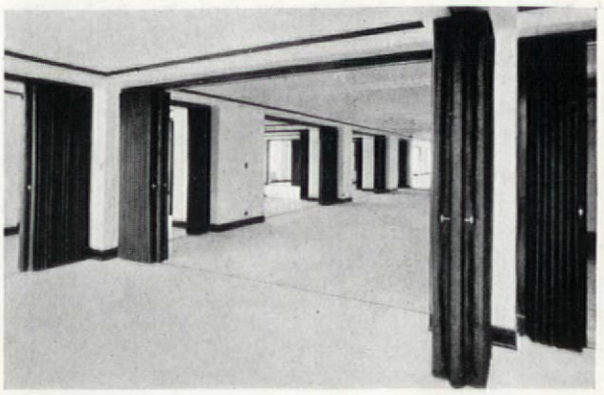


Courtesy of Bauwelt



FOLDING PARTITIONS AND DOORS

A novel means for closing off adjoining rooms or dividing one room into smaller units is made possible by the Fol-Dec folding partition. It is suited to hotels, schools, banquet halls, dining rooms, churches, Sunday schools, lodge halls, gymnasiums, apartments, hospitals, kitchenettes, and homes. The partitions are made of steel upright stiles, held in place by steel spacers, covered on each side with a blanket of heavy felt. The felt aids sound-proofing. The folding partitions can be opened like curtains and locked like doors, giving privacy.



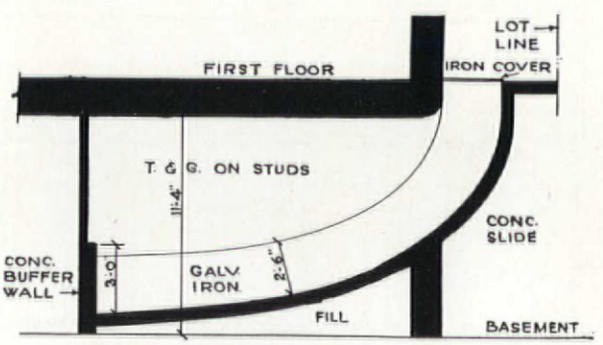
Courtesy of Folding Products Corp.

AUTOMATIC DOOR THAT OPENS TO ONE'S SHADOW

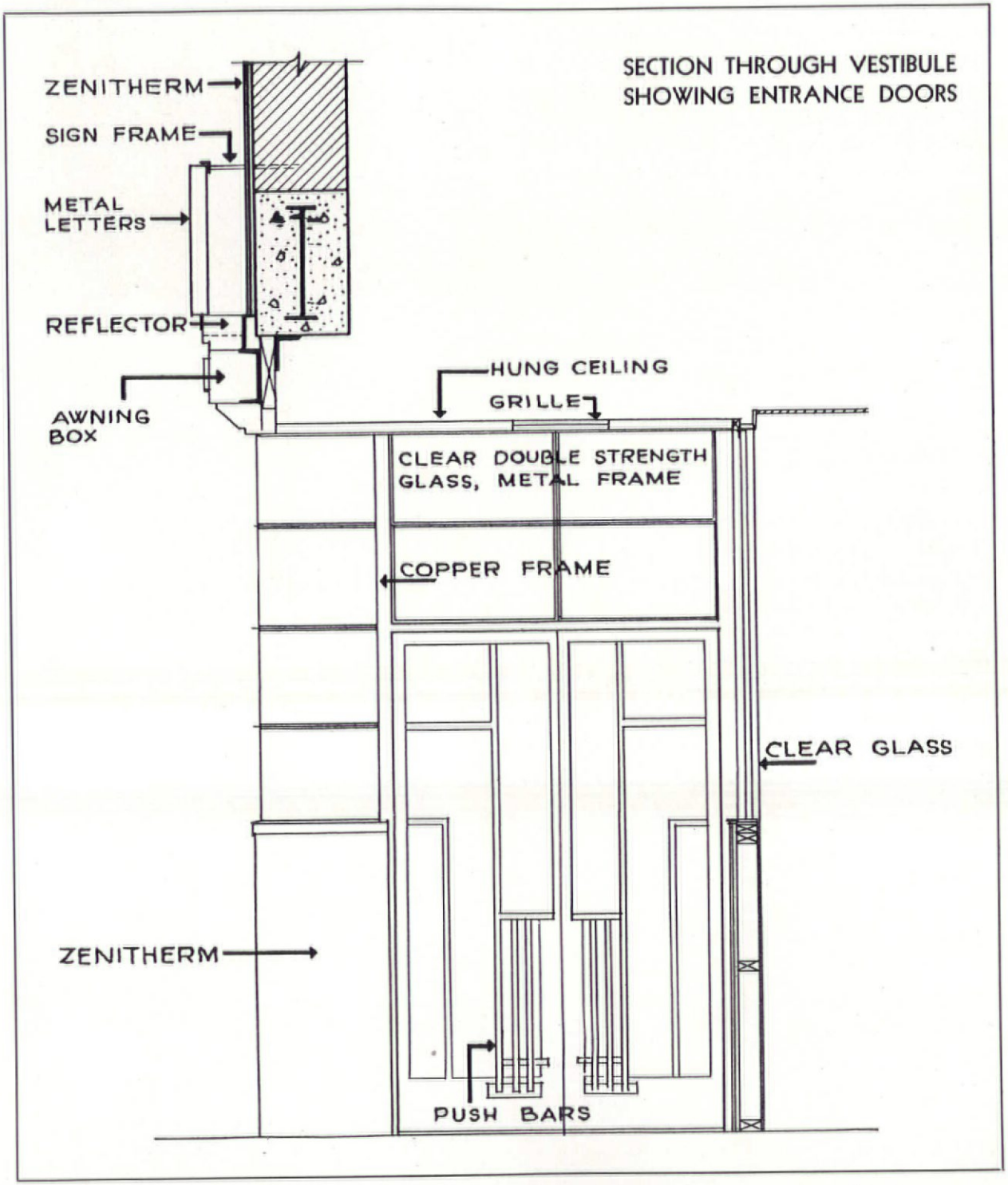
A sliding door has been devised by the General Electric Laboratories that opens and closes automatically. When a person approaches a door and comes within a proper distance it opens, and closes again after he has passed through the door opening. It operates by means of a photo-electric cell. "A ray of light is focused past the threshold of the door onto a photo-electric cell. This ray, when interrupted by the body of a person approaching the doorway, sets a hydraulic door-opener in operation. The hydraulic device is somewhat similar to that used in subway cars for opening doors." The door holds open for an adjustable period of time.

CHUTE TO BASEMENT

Boxes, barrels and even coal may be lowered to basement by a chute. The illustration indicates the construction of such a chute for the Hi-Hat Restaurant, by J. R. Davidson, architect, illustrated in this issue, pages 235-241. The slide is of concrete with side walls of T. and G. boards on studs. The lower part of the slide is faced with galvanized iron. A concrete buffer wall terminates the chute.

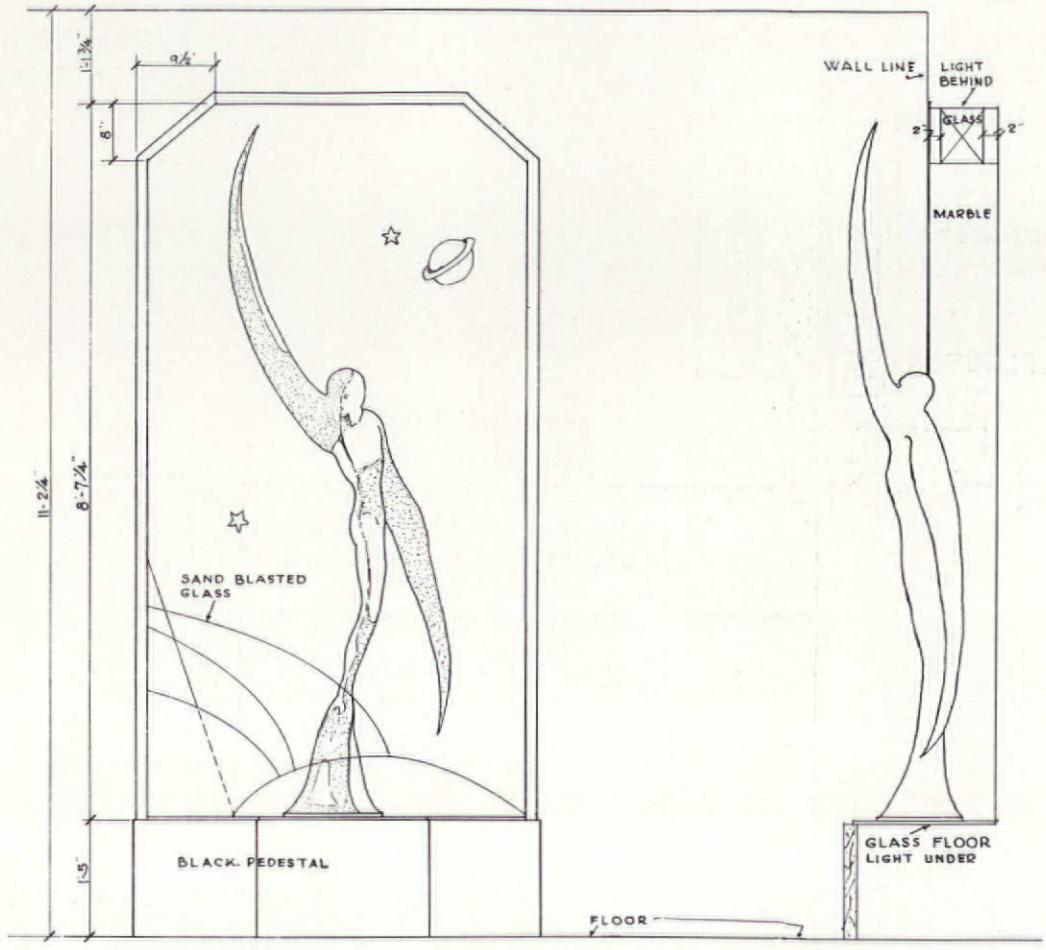


WORKING DETAILS

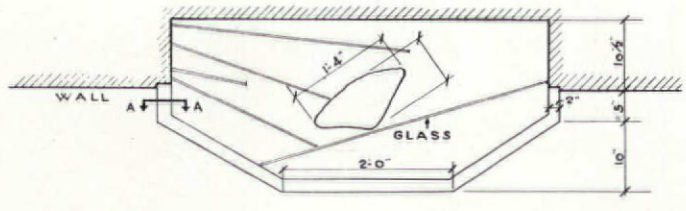


THE HI-HAT RESTAURANT,
LOS ANGELES
J. R. DAVIDSON, DESIGNER

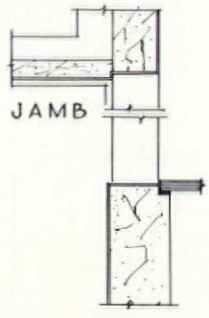
WORKING DETAILS



ELEVATION SECTION



PLAN

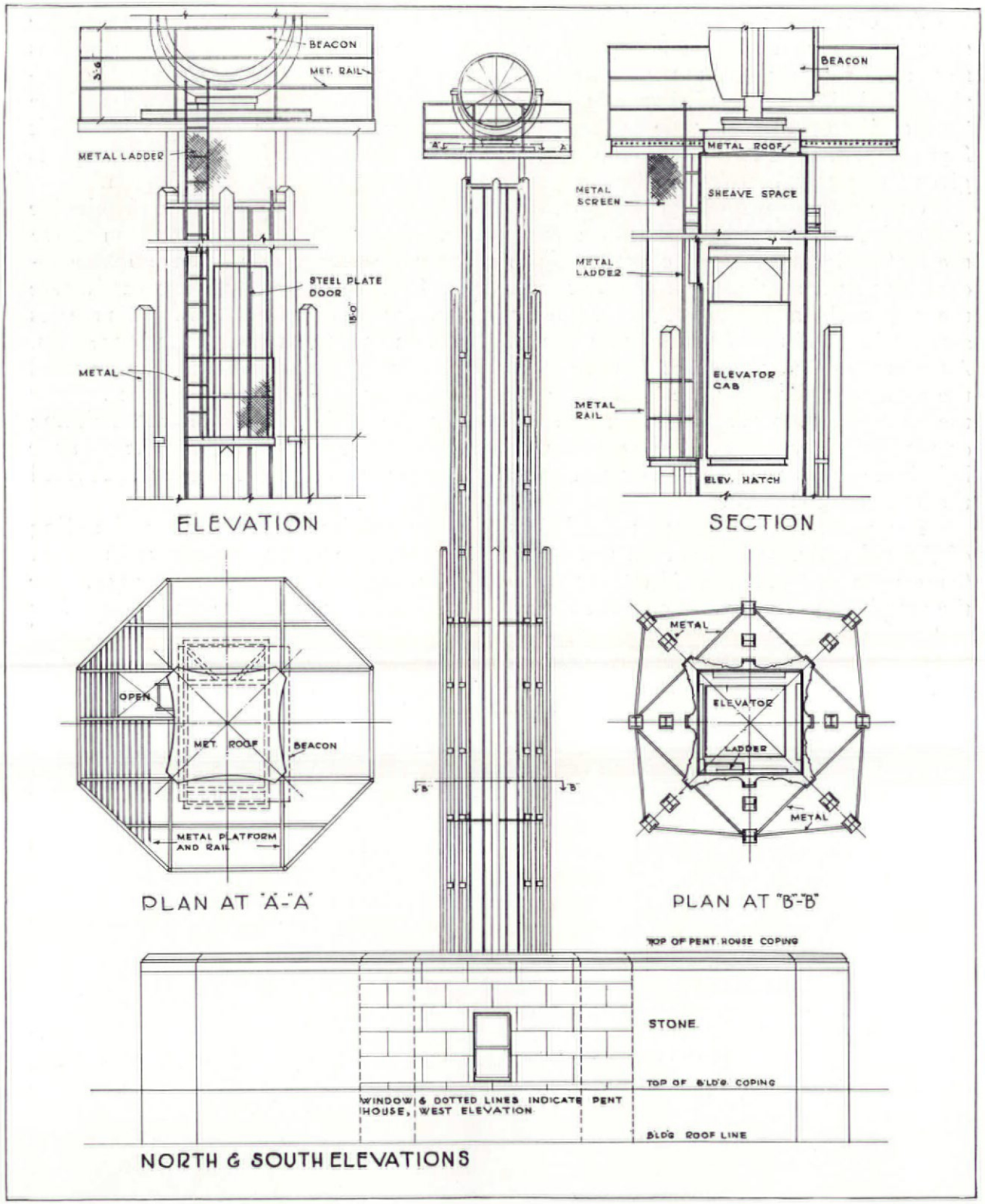


SECTION A-A

RAND BUILDING, MINNEAPOLIS, MINN.
HOLABIRD AND ROOT, ARCHITECTS

STATUE NICHE

WORKING DETAILS



THE PALMOLIVE BUILDING, CHICAGO
HOLABIRD AND ROOT, ARCHITECTS

AIR BEACON

UNIT COSTS IN OFFICE BUILDINGS

A recent report on office building construction showed fewer square feet of rentable space but an increased total construction cost. One cannot draw precise conclusions from such a report without more detailed information as to the character of the particular buildings involved, but it indicates what appears to be one of the results of the "modern" stepped-back type of construction, which is a higher unit cost per cubic foot and per square foot of rentable area. This general indication is borne out by figures given me by the architect of a building of this type under construction in Boston.

Our new law permitting this type of building was passed in 1927 as a permissible alternative to the flat 155′ limit otherwise still in effect. It permits construction above the 155′ limit providing all elements of construction are kept within an envelope developed by planes sloping back one foot for every 2½ feet in height, starting 125′ above the curb level, and applied to all lot lines, party lines as well as street lines. This creates a pyramidal form which permits a great increase in maximum height on large lots. A further restriction provides that the total cube of the building so built shall not exceed the cube determined by the "buildable area" of the lot multiplied by 155 feet. Thus the new provision permits no general increase in the cubic contents of the building except that the volume of the light courts, which would reduce the cube of the old style building, can be regained at least partially in the upper reaches of the setbacks, provided the lot is large enough.

I was interested to compare the figures of such a building with those for a building of the old style, 155′ high, on the same lot. They were given as follows in round figures: the buildable area of the lot was 20,000 sq. ft. which, multiplied by 155, gave the permitted cube of 3,100,000; the cube on a 155′ building would be 2,261,000 cu. ft; the cube on the setback building is 2,480,000 cu. ft. Here we find the older type would have obtained 73% of its permitted cube while the new type obtained 80%, a gain of 7%, equal to 219,000 cu. ft. Clearly a more intensive development of the lot.

In rentable areas, however, the figures were as follows: old style 213,347 sq. ft.; new style 220,600 sq. ft., a gain of only 7,203 sq. ft. The cube of the new style building increased 9.7% while the rentable area increased 3.4%. The rentable area for the old style building was 9.4% of its cube, that of the new style 8.9%. The increase in rentable area was only 3.3% of the increase in cube.

The conclusion is clear that more expensive rentable area is being built and therefore higher rents must be charged unless the smaller proportionate cost of the land offsets the increased cost of construction, which does not appear to be the case.

There are various obvious features of the upper setback floors that permit increased rentals per sq. ft.—light, air, quiet, corner rooms. These are good reasons for the "cost of high living" in our new office buildings, but we remember hearing a good deal about the economic necessity of high buildings.

The economic factor is evidently not cheaper unit costs of construction. The larger proportion of utilities in the upper smaller stories are clear confirmation of the increased cost per square foot of rentable area shown in the figures just quoted. Average cost per cu. ft. is also increased due to setbacks and added height above the ground.

The economic necessity appears to be the need of higher and more expensive buildings to carry the increased cost of the site, which is of course still further increased as a result of the opportunity afforded to build the higher and more expensive buildings.

One is irresistibly reminded of the phenomenon of a cat chasing its tail. Is this phenomenon being repeated in our present-day high buildings?

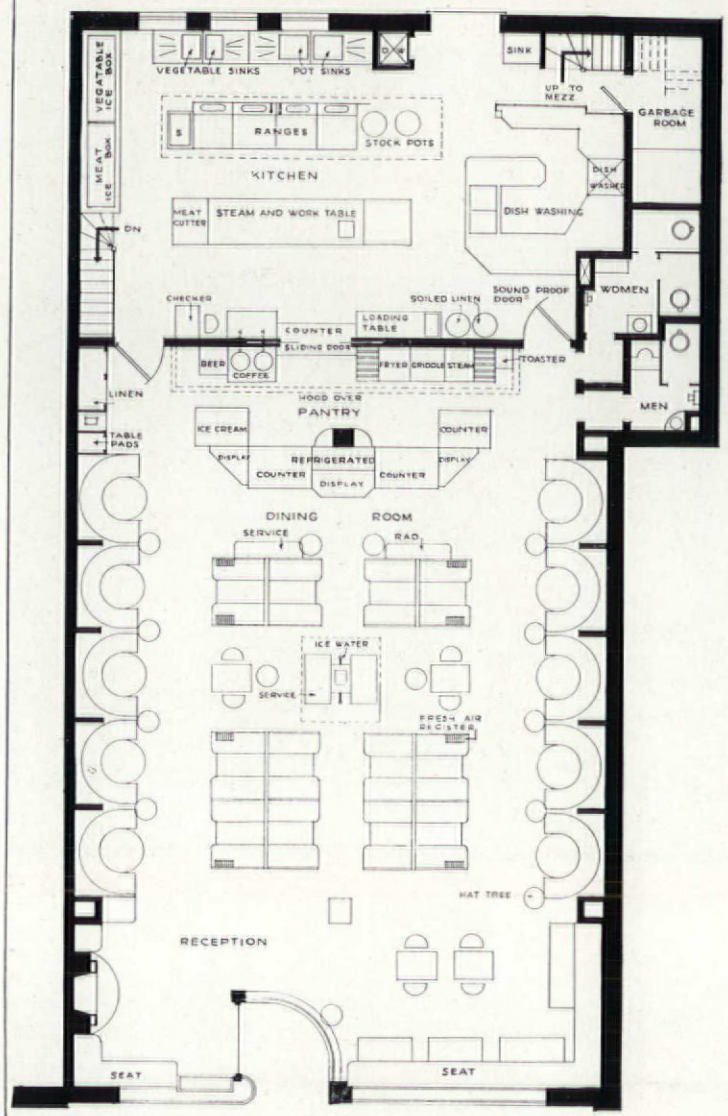
WILLIAM STANLEY PARKER.



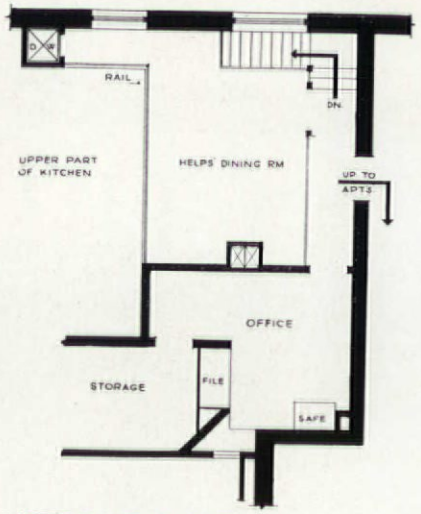
Morgan

RESTAURANT AT LOS ANGELES
J. R. DAVIDSON, DESIGNER

RESTAURANTS



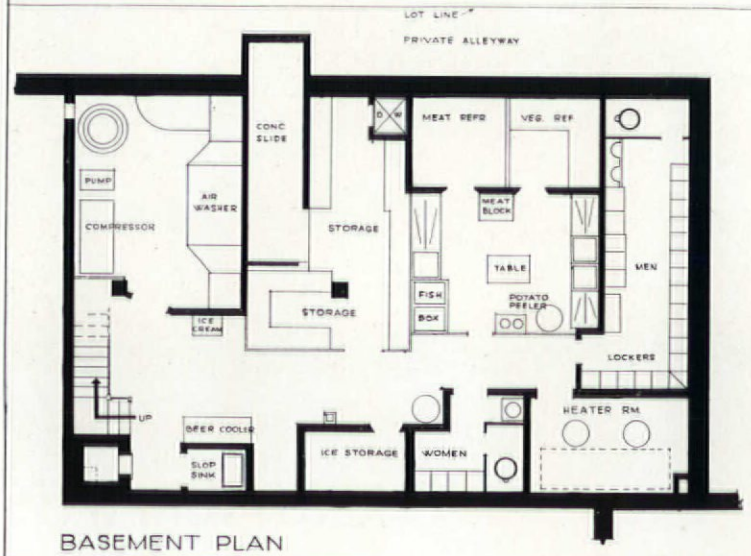
FIRST FLOOR



MEZZANINE FLOOR

THE HI-HAT® RESTAURANT
LOS ANGELES

J. R. DAVIDSON, DESIGNER



BASEMENT PLAN

FLOOR PLANS



Morgan

DETAIL OF SIGNS
Copper letters against flush opal glass.

THE HI-HAT RESTAURANT
LOS ANGELES
J. R. DAVIDSON, DESIGNER



Morgan

THE HI-HAT RESTAURANT
LOS ANGELES
J. R. DAVIDSON, DESIGNER

Entrance showing use of Zenitherm blocks, glass, copper, steel and half-cylindrical Frink linolites on the rounded corner.



Morgan

Entrance door of copper and glass.

THE HI-HAT RESTAURANT
LOS ANGELES
J. R. DAVIDSON, DESIGNER

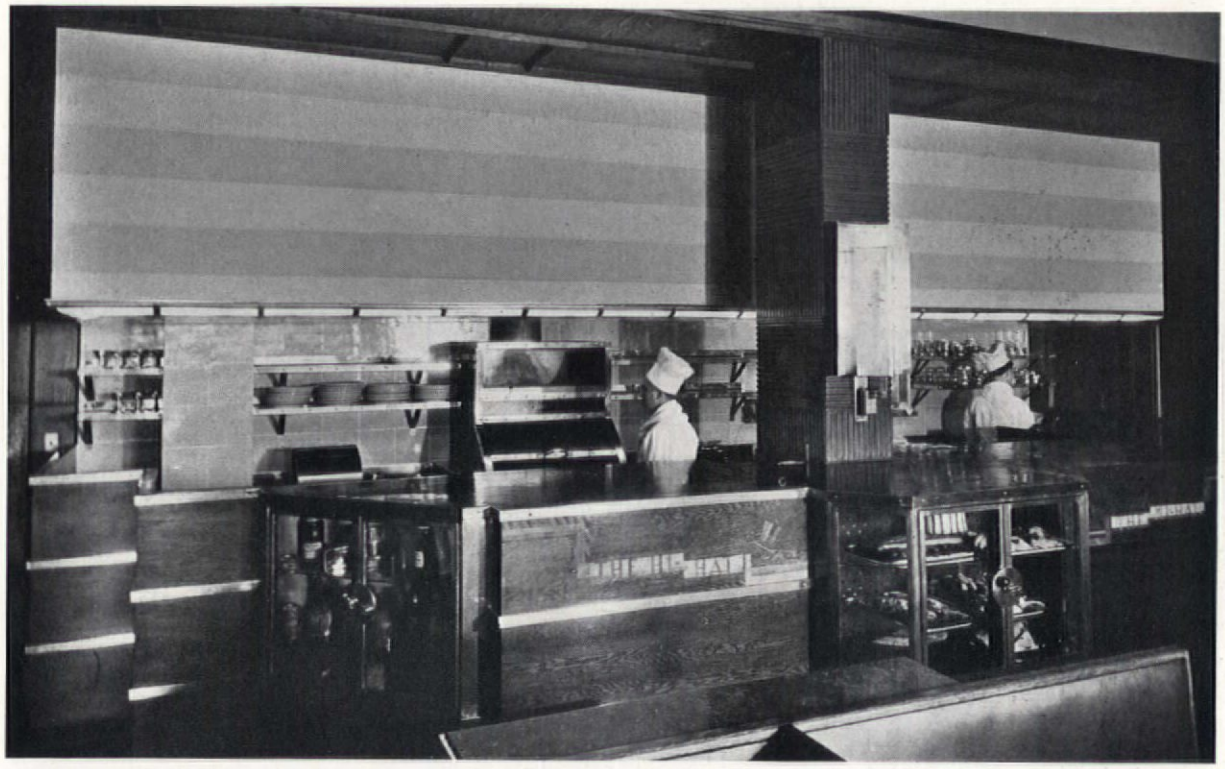


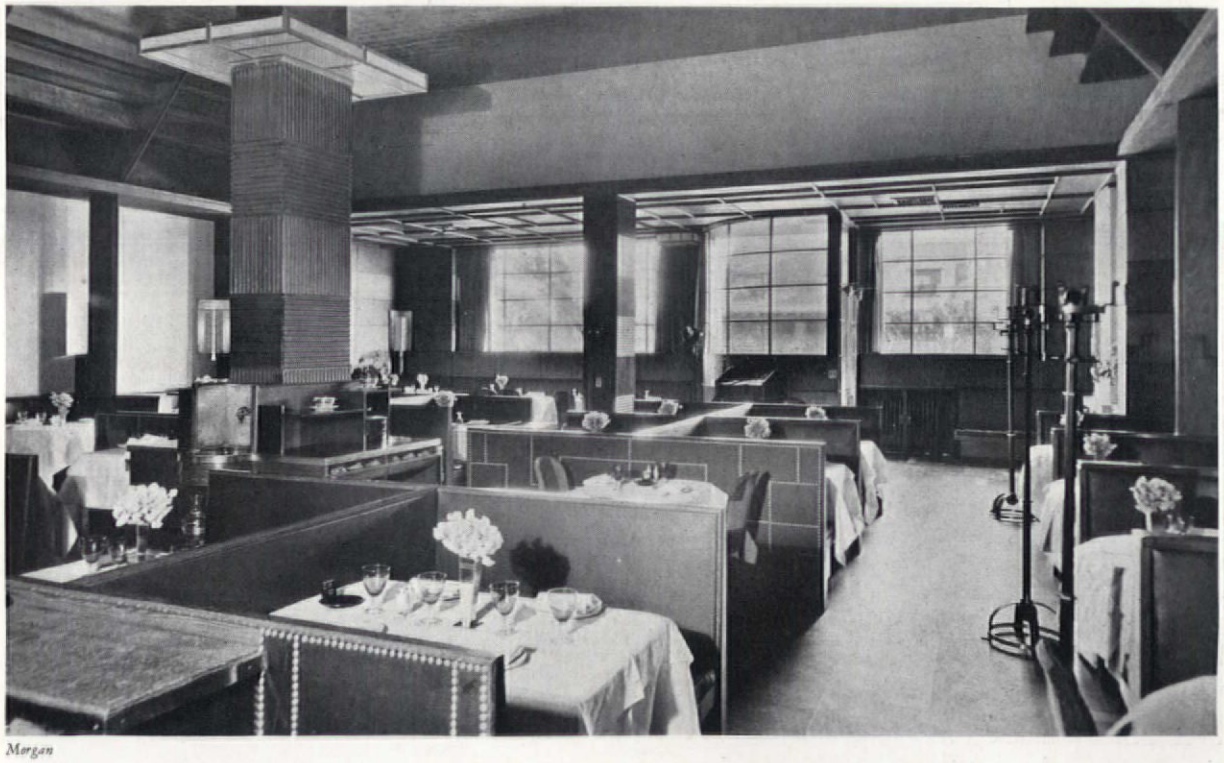
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THE HI-HAT RESTAURANT
LOS ANGELES
J. R. DAVIDSON, DESIGNER

DINING ALCOVES

Detail showing stepped cornice of redwood, behind which is the exhaust ventilation. Flower vases of Monel metal.

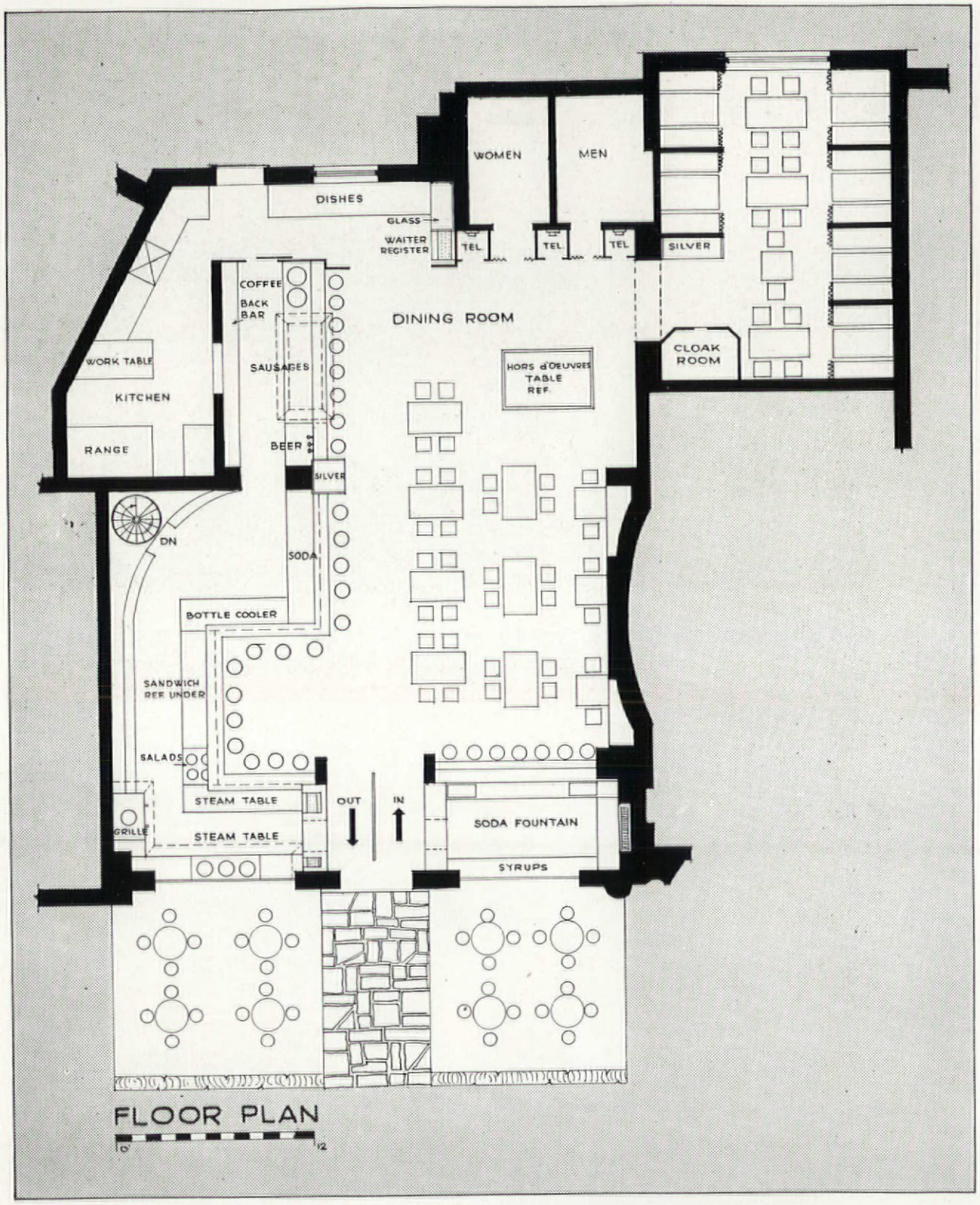




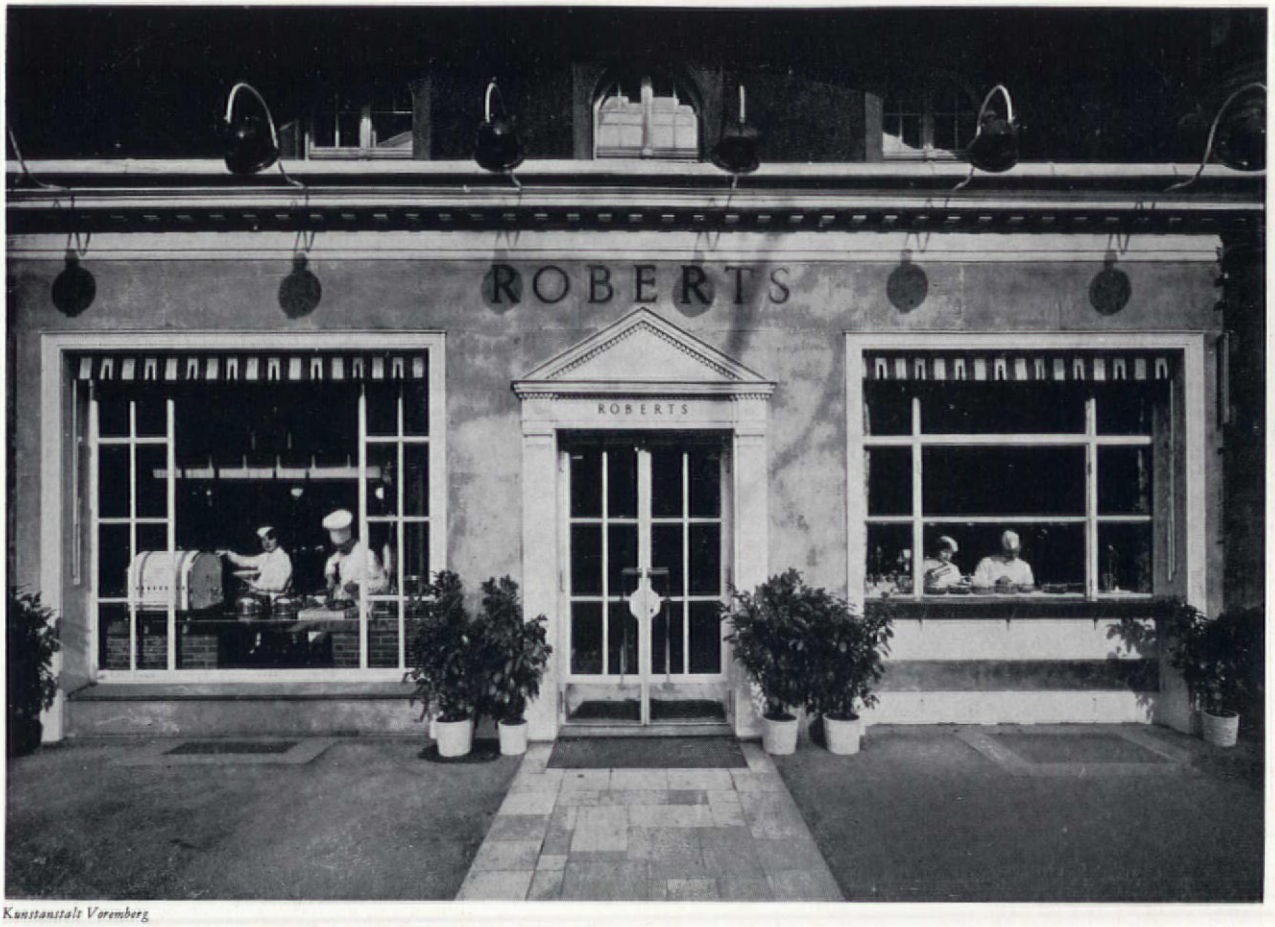
Morgan

Above . . . PANTRY: Counter of oak, copper moldings and insets of different woods. Display compartments of copper and glass. Greenish yellow tile in rear. Below . . . INTERIOR VIEW.

THE HI-HAT RESTAURANT
LOS ANGELES
J. R. DAVIDSON, DESIGNER



AN AMERICAN RESTAURANT
IN BERLIN
R. E. LEDERER, ARCHITECT



Kunstanstalt Voremberg

AN AMERICAN RESTAURANT IN BERLIN

R. E. LEDERER
ARCHITECT



C. Atelier Stone

AN AMERICAN RESTAURANT IN BERLIN

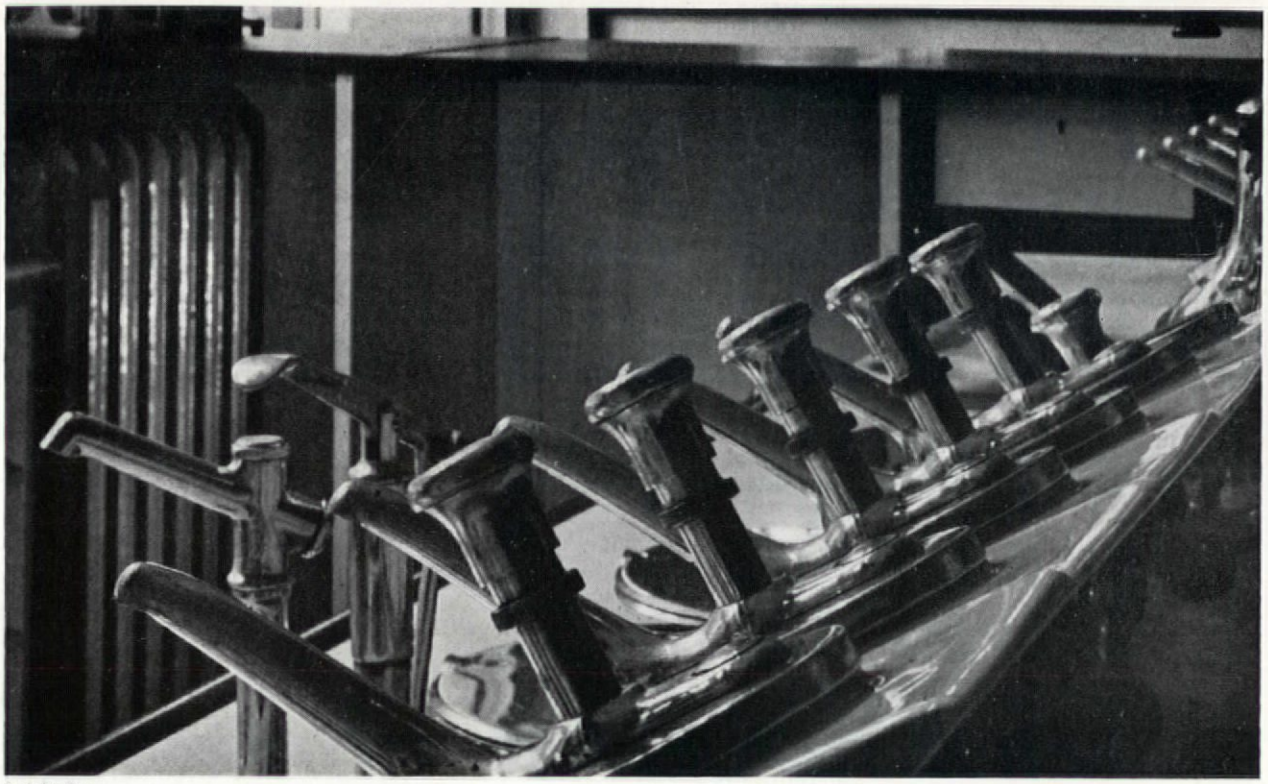
R. E. LEDERER, ARCHITECT



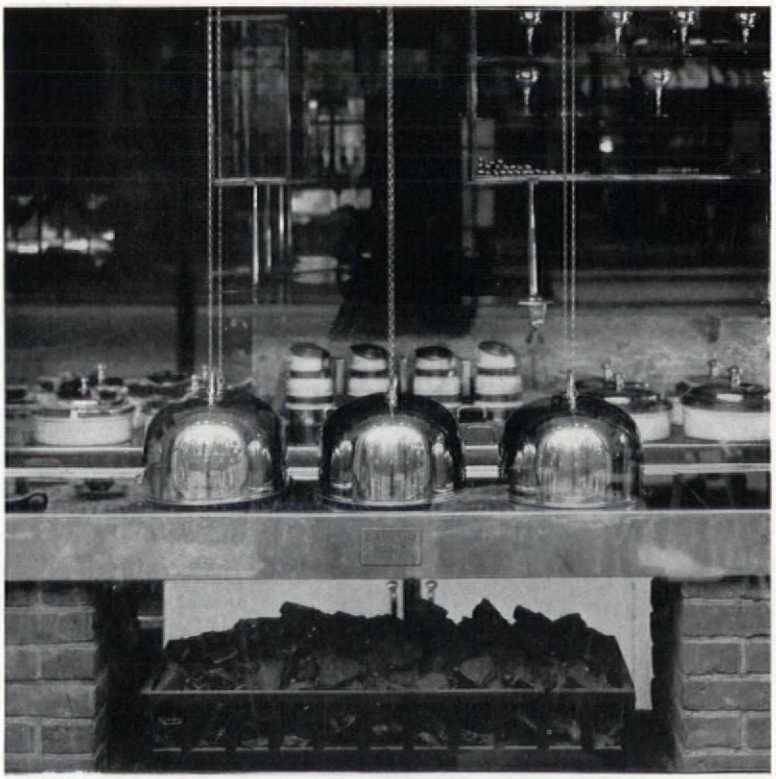
C. Atelier Stone

AN AMERICAN RESTAURANT IN BERLIN

R. E. LEDERER, ARCHITECT



C. Atelier Stone



C. Atelier Stone

AN AMERICAN RESTAURANT IN BERLIN

R. E. LEDERER, ARCHITECT



Courtesy of Albert Pick-Barth Co.

TECHNICAL NEWS AND RESEARCH

RESTAURANTS

By FREDERICK PUTNAM PLATT, ARCHITECT
and ROBERT L. DAVISON

ANALYSIS OF SUITABILITY OF LOCATION

There are two distinct conditions under which architects must concern themselves with restaurant planning. The first involves detailed planning and design of space for a particular restaurant. The second is encountered in designing commercial projects which must provide space suitable for subsequent rental to restaurant operators.

Before starting on a restaurant design, it is well to make an analysis of the problem, which will include:

a. An analysis of the neighborhood.
b. Rent desired.
c. Space available for use.

Analysis of Neighborhood to Determine Type of Service. An analysis such as follows, if prepared by the owner or renting agent, will assist in determining the type of food service that space should be provided for:

1. What classes of patrons are available—business and professional men, office men, office women, students, shoppers, theater crowds, factory men, factory women, laborers, farmers, auto tourists, out-of-town people, resort patrons, etc.? Which of these classes predominates?

Data have been assembled from practical experience in the planning and construction of, and research into, the requirements and conditions found in typical restaurant layouts in the larger clubs, hotels and public restaurants as well as the different forms of lunch rooms, cafeterias and restaurants adopted by the larger chain groups in New York and elsewhere.

The purpose of the article is to supply working principles of design and planning which, in the hands of the architect, will contribute to the creation of commercially successful restaurants of various types. We discuss three major types:

(A) Table service (public and hotel, large and small).

(B) Counter service (soda, sandwich shops and food bars).

(C) Self-service (cafeterias, automats, lunch rooms).

We express appreciation for cooperation of the following:

L. O. Robland, associated with F. P. Platt and Brother, architects.

Miss M. Lewit, mgr., Coworkers' Cafeteria, L. Bamberger & Co.

Milton Lowenthal.

Albert Pick-Barth Co.

Duparquet, Huot & Moneuse.

Nathan Strauss & Sons.

2. Does heavy pedestrian traffic pass by? Is this traffic of a type which will stop to patronize a restaurant of the type contemplated?
3. Is auto traffic a factor and, if so, is parking space conveniently available, and are traffic regulations favorable?
4. For how many hours in the day is patronage available—24 hours, 18 hours, or short period? Can all three meals a day be served, or only one or two? How much between-meal patronage can be expected? How much evening and night patronage? Are the prospective patrons limited in the time during which they must eat?
5. Are violent seasonal fluctuations in trade probable?
6. Is the patronage dependent upon one single class of trade or upon many? Is the character of the neighborhood likely to be changed in the future, and if so, how?
7. What kinds of restaurants are already in the vicinity? Are they operating successfully? Is there more business than they can handle?
8. If the business is confined to one or two rush periods, will the idle periods eat up the profits?

Rent Desired from Space. As a rule of thumb, the owner expects the *ground floor rent* to be at least 6% of the cost of the land. Whether he can get this rent will depend on a number of factors, a very important one being provision by the architect for proper types and varieties of stores on the ground level. This will require preliminary analysis of the problem by the owner and rental agent in cooperation with the architect.

If a restaurant can not afford a ground floor location, it may be necessary to provide space in the basement. In large cities basement rentals suitable for restaurants will average $1.50 to $2.00 a sq. ft. To this must be added the cost of the street entrance, which may cost from $750 to $1,500 a front foot. A 10′ x 25′ entrance may cost $7,500 to $15,000, while a 100′ x 100′ basement space will cost only $15,000 to $20,000, making a total of $22,500 to $35,000 for a 100′ x 100′ space and entrance.

Some chain restaurants pay from 4% to 8%, depending on location and space conditions. A restaurant with a daily receipt of $1,500 in a profitable location and depending upon the type of service may pay 4% to 6% of its gross for rental, or $18,000 to $27,000 a year.

Space Available for Use. Practical areas and sizes for different types of restaurants in desirable locations in the larger cities:

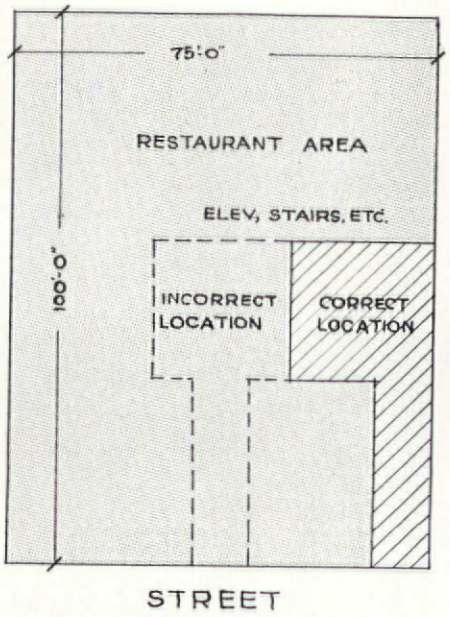
1. Small lunch room: 14′ x 60′ lunch bar; no tables. Space 18′ x 60′ will permit bar and one row of tables. Either will require approximately same area of basement for work space as restaurant seating 60 to 150.

2. Medium lunch room: 2,000 sq. ft. dining area, 2,000 sq. ft. work area; dining room 25′ x 80′, seating 150 to 200.

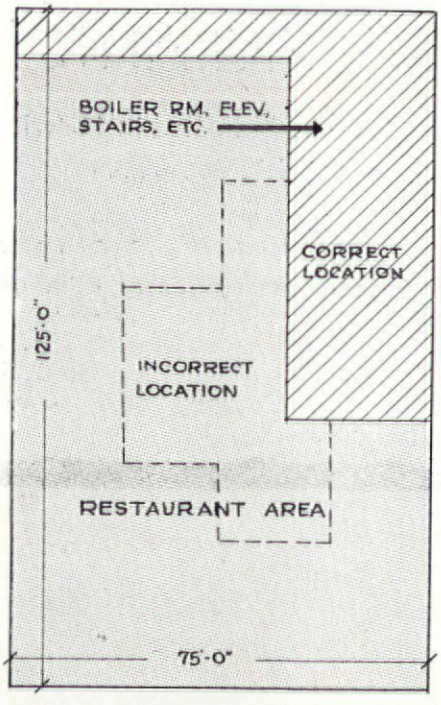
3. Cafeteria (better class): dining area 3,500 sq. ft.; work area 3,000 sq. ft.; dining room 35′ x 100′, seating 250 to 350.

4. Restaurant (higher class): dining area 5,000 sq. ft.; work area 4,000 sq. ft.; dining room 50′ x 100′, seating 350 to 450.

The above areas are approximate units in size developed from a survey of three of the larger chain-restaurant concerns of a large city. They represent the general requirements for the different types, such as lunch rooms, cafeterias, and restaurants.



Original plan of commercial building changed to make basement and first floor space more suitable for restaurant. Correct and incorrect locations of elevators, stairs, etc., are shown.



Frequently basement areas are needlessly cut up through failure to group service areas to side and rear. Preliminary plans of commercial building revised to give consolidated restaurant space.

Dining Room Areas. The shape of the room must permit a satisfactory dining room arrangement for the particular type of restaurant. The place under consideration should be sufficient to take fullest advantage of rush-hour business.

The entrance and store front treatment must be such as to attract business although the frontage does not always have to be so great in proportion to the total area as for other tenancy.

DETERMINING TYPE OF RESTAURANT SUITED TO PROBLEM

Types of Food Service. There are many distinct types of food services, but they may be grouped into three general classes:

A. *Table-service restaurants* are, of course, the oldest type and still hold an indisputable place as the highest class catering. Among their advantages are the most convenient method of service for patrons, quietness of service, pleasant social atmosphere. Among their disadvantages are slowness of service, which means fewer meals per seat per hour, high payroll and overhead, higher prices and the necessity of tipping.

It is not generally advisable to plan for waiter-service restaurants in floor space which, due to location and traffic, has a high potential rental value. Generally speaking, such restaurants cannot afford to pay as much for rental as counter service.

Waiter-service restaurants are holding their own, but are limited to locations where people can take their time at meals and are willing to pay a higher price for service.

B. *Counter-service restaurants* (lunch rooms, sandwich shops, soda fountains). Their advantages are rapidity of service, large number of meals per seat per hour, few employees, the ability to operate in a small space, 24-hour service with a small force, large volume in proportion to rent and investment, and low prices. Their disadvantages are the noisier atmosphere and the fact that many people, especially women, are averse to eating at a lunch counter.

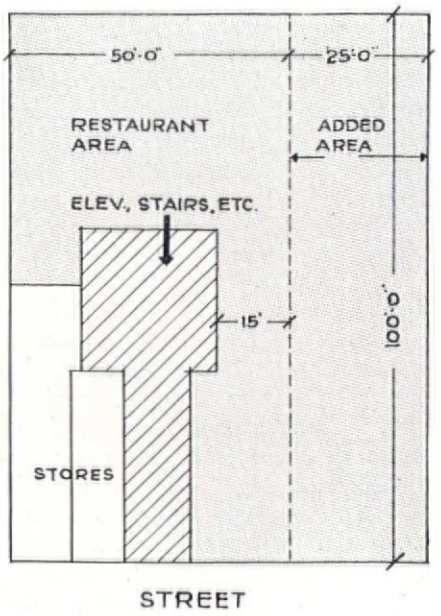
Due to the ability of counter service to make good earnings from a large volume of traffic, it can and does pay a higher rent per square foot of space than the cafeteria or waiter-service restaurant.

Lunch rooms are growing very rapidly in proportion to the industry in general because they are one of the best commercial methods of serving food, and can be operated successfully in the largest variety of sizes and locations.

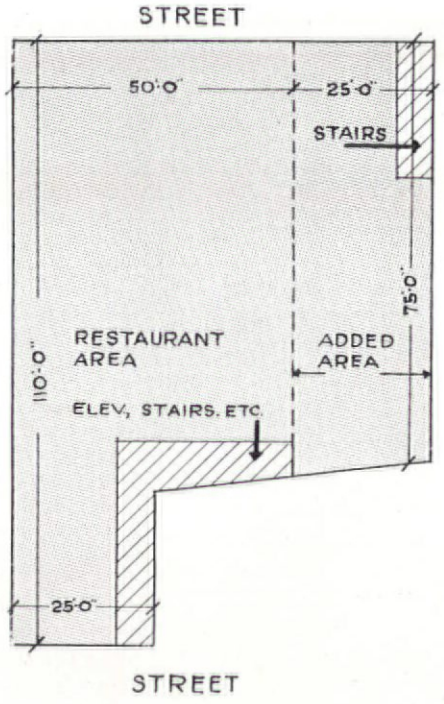
C. *Self-service restaurants* are undoubtedly the most efficient method of food service during rush hours, and have as advantages quick selection of food, rapidity of service, great drawing power for women's patronage, a large assortment of popular and profitable dishes, an appeal to the eye which builds up check averages, low operating cost, fewer higher-salaried employees for both cooking and service, reasonable prices and less necessity for tipping.

Where most of the cafeteria business is done only in the noon rush hours they cannot pay as much per square foot of floor space as lunch rooms. In high rental districts provision for cafeterias will generally be limited to basement areas.

Cafeterias, while extremely efficient in food service, are growing less rapidly in numbers than lunch rooms, partly because cafeterias must always be large in size, and partly because they are limited to certain general types of locations owing to the character of trade which they are best fitted to attract. Cafeterias are almost in-



Building where it was found necessary to add 25 feet of adjoining plot to make area rentable for restaurant.



Plot bought for restaurant purposes and found to be too small for a proper return. Adjoining property was added to make the venture sound and profitable.

variably found the best type of service for employee, school and other similar feeding problems.

Often a combination of two types, where both waiter service and counter service are used, is practical. Also in counter service restaurants a few tables with waiter service from the counter appeal to women and meet rush-hour demands without increased counter length.

REQUIREMENTS OF THE INDIVIDUAL DINER

Space Factors. Before starting to lay out a dining or lunch room it is advisable to determine the space required by the average person when eating. Consideration should be given to the average maximum and minimum dimensions of people so that, when possible, provision may be made for individual variations in size.

1. *Width.* The average person is 20″ across the shoulders. Allowing a minimum of 4″ clearance on each side, the minimum width of space occupied by a person would be 24″. This gives room for only a limited number of dishes on the table or counter in front of the diner. Where the guest may have several side dishes it is better to provide a width of 30″.

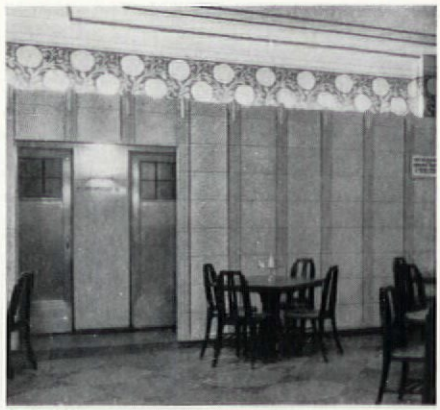
2. *Depth.* The average man, seated, measures 24″ from his back to the front of his knees. When seated comfortably at a table, approximately half of this distance is occupied by his legs under the table and the balance by his body and clearance from the table edge. In addition to this distance, the back of the chair slopes backward 2″ or 3″. Approximately 8″ clearance between the table and a chair are required for convenience in getting into a chair. As the chair seat will generally extend 4″ under the table it is advisable to leave 8″ plus 4″ or 12″ in rear of chair where comfort in getting into or out of chairs is desired. Where chairs of two adjoining tables are back to back 18″ will be found ample space if not used for an aisle. In the case of using stools in a room where space is limited, it is generally advisable to leave 18″ aisle space for persons passing in rear of seats. The dimensions required for *comfort* are the same regardless of whether chairs or stools, table or counter are used, since the position of a person's body should be the same in either case.

3. *Height of Chair, Table and Counter.* Most chairs are 18″ high and tables 30″ high. People (irrespective of their height) have become so accustomed to this difference in level between chair and table height that any variation from this position is uncomfortable. Therefore, it is important that the same relative position between a person's mouth and the eating surface be kept when counters are provided.

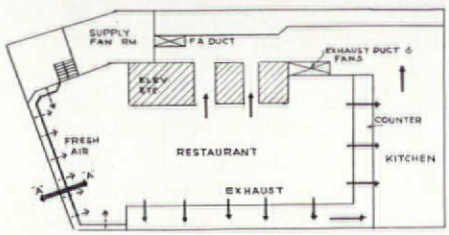
On this basis, assuming that the average man is 5′ 9″, the counter intended for use both when standing and with stools would be 42″ high and the stool 12″ less, or 30″ high.

There is a decided tendency in recent lunch counter design to lower the counters to table height and provide a seating arrangement which approaches, in comfort, that obtained with chairs. When this is done, it is generally advisable to counter-sink the floor back of the counter so as to eliminate the necessity of the waiters having to bend over while serving.

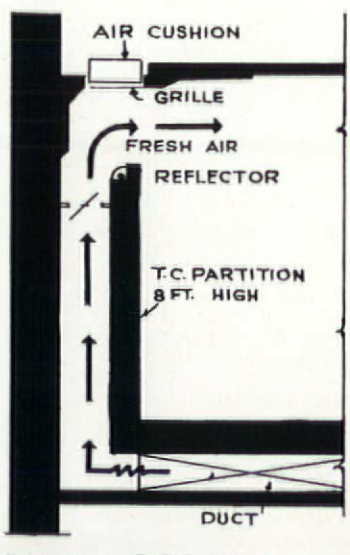
Where for structural reasons it is not desirable to lower the floor, the stools are sometimes placed on a raised platform, but this is to be avoided, as patrons will sometimes trip in getting off stools or the platform, and the lunch-room owner will be subject to damage suits. A better method is to provide foot-rests attached to chair or stool.



Rothschild



Horn and Hardart Cafeteria, New York City.
F. P. Platt and Bro., Architects.
All air should move toward the kitchen in order to prevent odors reaching the dining room. In this plan the fresh air enters the room from behind T. C. partitions as shown in photo above.



DETAIL "A"-"A"

Section through wall showing method of admitting fresh air. The air cushion is provided to prevent drafts from direct air currents. Note location of the light reflector.

Comfort Factors:

1. *Ventilation.* Proper ventilation in a place where food is served is so essential for the comfort of the patrons that very little need be said about it. Some recent restaurants show the importance accorded this feature by air-conditioning—including heating, cleaning, and cooling. It seems quite probable that air-cooling will increase patronage and stimulate the customer's appetite, but whether this increase will be sufficient to warrant the installation of such equipment will depend on type and size of restaurant. The Horn and Hardart Co., in several of their larger, popular-priced restaurants, have installed air-conditioning and cooling systems. Although the cost of installation and operation may make such a system impractical for the small restaurant, the slight increase in cost with increase in size of room may make it a very economically desirable adjunct in hotel or other large restaurants.

In considering the advisability of installing an air-cooling system in a restaurant, it is well to consider the effect that these systems have had on the attendance of movie theaters. It is quite likely that in the near future air-cooling equipment will be as essential for restaurants as it now is for movie theaters.

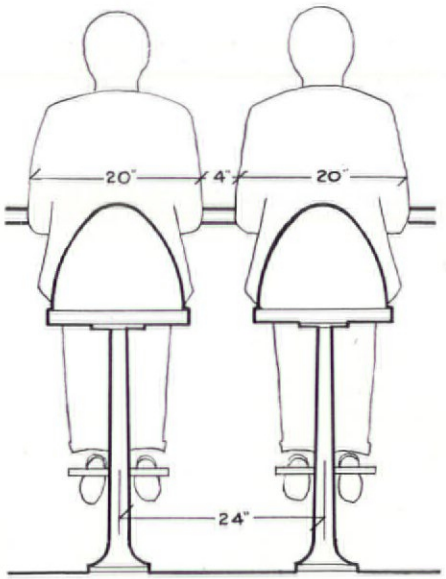
2. *Quiet.* A very important element in the provision of pleasing surroundings and one that is frequently neglected, generally by the owner on the grounds of cost, is the planning, construction, and equipment of a restaurant so as to prevent noise. This is an important item in any type of restaurant—from a lunch wagon to the most exclusive dining room.

Walls and ceilings should be covered with a resilient material. All service tables should be covered with a material such as rubber. There should be double doors between kitchen or pantry and dining room. Ventilating fans should be of the noiseless type or installed at some distance from the dining room, as the steady buzz of fans may create a subconscious annoyance. If the restaurant is on a noisy street it may be desirable to plan to keep the windows shut at all times and depend on artificial ventilation.

3. *Lighting.* This factor is of considerable importance in creating the right atmosphere. The amount of light desired will depend entirely on the type of patronage desired. For formal dinners and banquets it is generally desirable to provide strong lighting, and consideration should be given to avoiding glare. For restaurants catering to women, an amber-colored light is preferable, as it makes women look younger. Electric table lamps have certain drawbacks, complicating service and gathering dust, but are often used to create "atmosphere."



The diner's posture should be the same whether sitting at a table or counter.



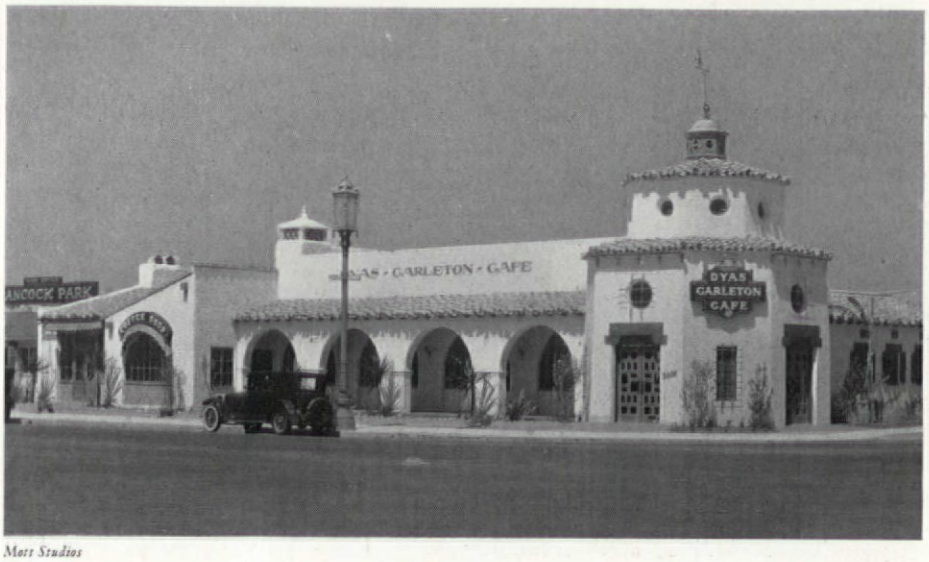
Chairs or stools should not be less than 24 inches center to center.

ENTRANCES AND FRONTS

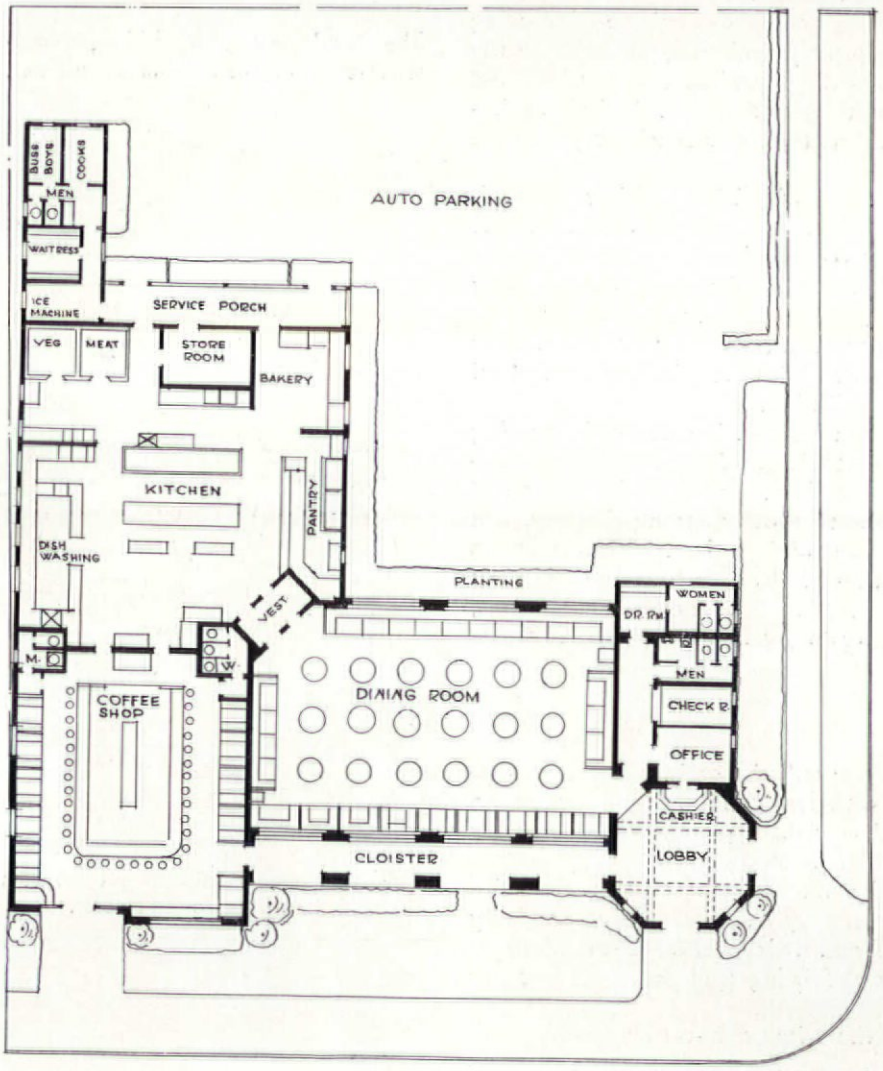
Restaurant entrances and fronts should be designed primarily to attract the patronage desired. Well-designed signs properly located are the most valuable method of drawing attention, except for restaurants catering to an exclusive patronage.

Show windows are essential for all except the more expensive restaurants, in order that the passersby may glance in and quickly determine the type of service offered. It is essential that the cheaper restaurants give the appearance of being spic and span but not expensive.

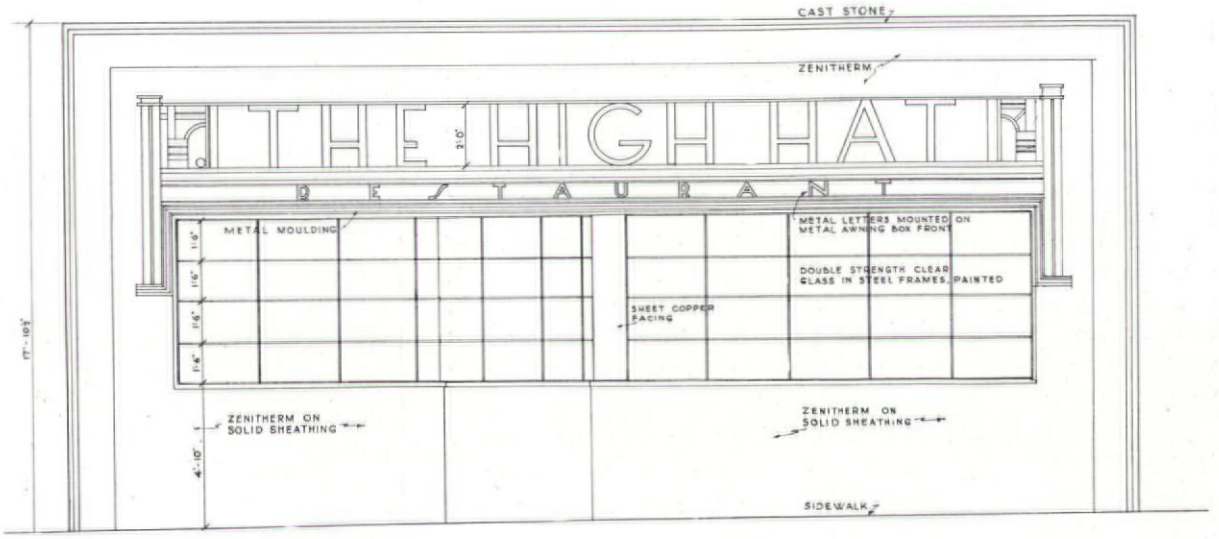
Display of specialty cooking in the window has often been used as a means of attracting customers. The cooking equipment is generally electric, gas plate or the rotisserie type. Where the window is not curtained or has no back to act as a reflecting surface, very



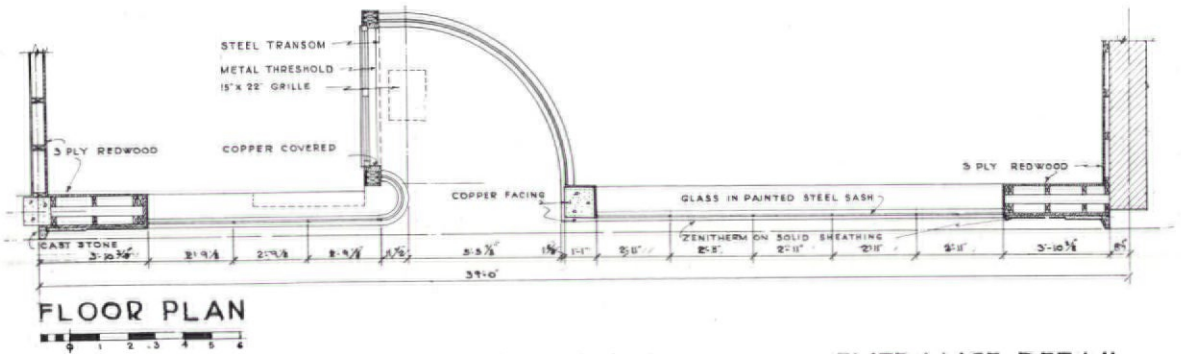
Mott Studios



DYAS-CARLETON CAFE
LOS ANGELES
GABLE AND WYANT
ARCHITECTS



FRONT ELEVATION



FLOOR PLAN

satisfactory results have been obtained by using etched glass as reveals illuminated by concealed reflectors.

An air of luxury may in some few localities be an asset, but in most cases people who patronize lunch rooms do so because they wish to save money, and a lunch room which has an expensive appearance will frighten away some potential patrons. This has been the experience of numerous hotels which have tried to conduct lunch rooms in surroundings that were suggestive of luxury and high prices.

It is equally important that higher grade restaurants display the character of their service. Cafeterias should be arranged so that the counter is visible from the street.

A special entrance problem arises when the restaurant is in the basement. The first floor space available is seldom over 10 feet wide, making show windows impossible. An effective entrance can be secured by setting the doors slightly back from the street, and flanking them with attractive showcases.

Since the patron enters directly into the dining space, except in the more pretentious restaurants having foyers, it is essential that diners be protected from draughts. Revolving doors are probably the best solution of this problem, but two sets of swinging doors usually will be satisfactory. Sometimes setting the inner door at the side of the vestibule and diverting the air currents will be advantageous. This also reduces the possibility of patrons passing through hurriedly and leaving both sets of doors open at once.

ENTRANCE DETAIL
HI-HAT RESTAURANT
LOS ANGELES

J. R. DAVIDSON, DESIGNER
(See pages 235-241).

DINING SPACE

Decorative Treatment Suitable to Class of Patrons. Appealing to the guests' tastes depends upon an analysis of the class of patrons as well as a knowledge of local customs and preferences. If the restaurant is one which caters to a general trade this may be a negligible factor, but in cases where a single definite type of trade predominates, it is exceedingly important.

Special consideration should also be given whether the class of patronage desired will be largely women or men. This difference is of such importance that in many restaurants, such as Schrafft's in New York and Grayling's in Chicago, separate rooms have been created in order to make a successful bid for patronage of the two classes of trade.

Dividing Dining Space. Except for dining rooms of a formal nature it will often be found that dividing the dining space into small units will add considerably to the attractiveness of the restaurant. This practice is being followed by some of the larger and more successful restaurants. Generally, the rooms are furnished and decorated in slightly different arrangements. These rooms may also be used for private parties. There is a restaurant in Berlin where each room is done in the style of a different nation and the food served to suit the national characteristics.

The division of the dining space into small units adds very considerably to the homelike character and eliminates a considerable proportion of the noise and confusion generally found in large restaurants, and if well planned permits a simpler service problem.

Balconies are a good solution where more tables are required and where ceiling height permits.

Stairs in the dining area for the use of the patrons should be commodious and of easy pitch. This is particularly important in cafeterias where a patron must carry his tray to a balcony table. A riser of 6½″ and a tread of 11½″ has been found very satisfactory. The location of the stair must be chosen so that it is prominently visible to the entering patron, and in cafeterias, from the counter also. For the same reason the railing should be of an open design. Directing signs are often a help in keeping balcony tables filled. For



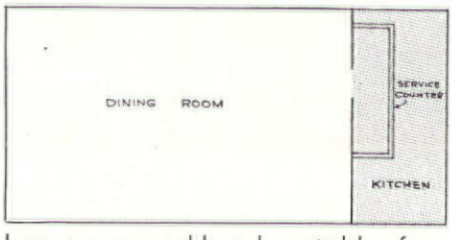
Nyholm and Lincoln



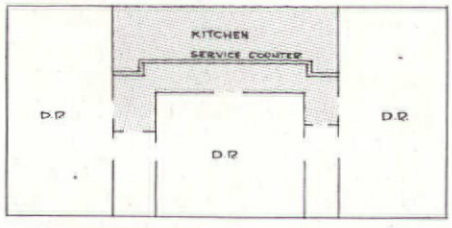
Tebbs and Knell

Note space lost by "atmospheric effects" in cafeteria, New Orleans.

FAVROT AND LIVAUDAIS, ARCHITECTS



Large rooms although suitable for formal or cafeteria service may lack homelike character.



Dividing the space into small units adds to attractiveness, simplifies service, and eliminates much of the noise and confusion of the larger dining room.

Stairs to balcony should be easily seen by patrons.

HORN AND HARDART RESTAURANT

F. P. PLATT AND BRO., ARCHITECTS

cafeteria mezzanines, an additional exit stair is advisable to avoid having descending patrons conflict with those ascending with trays. The materials of the tread should be of a non-slip nature, to avoid accidents and resulting claims; travertine marble and pre-cast terrazzo with abrasive aggregate have both proven very satisfactory.

Planning for Several Uses. It is not uncommon to have several types of eating places served from one kitchen. Often a grille and restaurant, or cafeteria and restaurant are served from the same kitchen.

The problem of planning the same dining area for cafeteria service during the day and waiter service at night is one which presents itself at times and which is solved only after a careful study of the peculiar conditions involved. Bamberger's Coworkers is a good example of a well-planned layout for dual use. In many cases, however, the dining room is separated from the service counter merely by a movable partition. There is also the condition in which the counter is closed off by a rolling screen. The waiter service, in this case, would be from behind the counter.

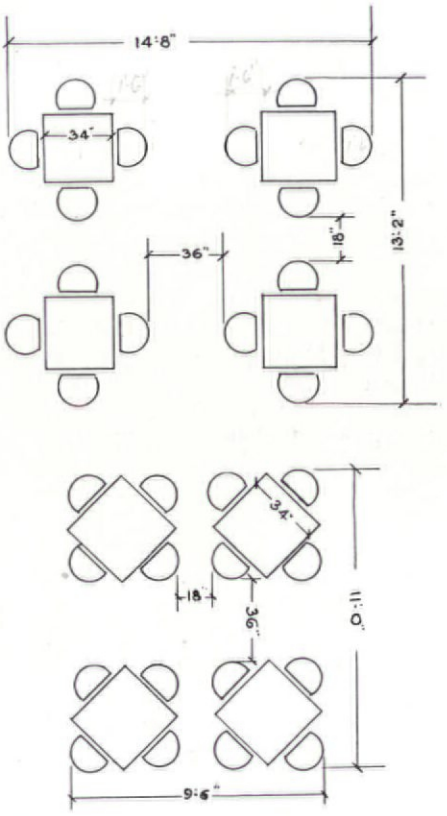
Table Arrangement. In planning the table layout it is well to provide an efficient assortment of sizes in order to have a minimum of partially occupied tables. For this reason it is always well to plan for a considerable proportion of tables for two. It is better to use two deuces, separated by 6″ to 8″ of space, than one oblong table for four. It has been found by experience that people will sit at seats 3 and 4, illustrated in Plan A, whereas they do not sit in seats 3 and 4 in Plan B, unless there are no other seats in the room. Tables for two should have one side equal to a side of table for four so that they may be placed together for a party of six.

For the class of restaurant which requires the maximum number of tables that can be placed in a given space consistent with allowing room for aisles, placing the tables at an angle will be found to add to the efficiency. The minimum size for an aisle in which service and patrons circulate is three feet.

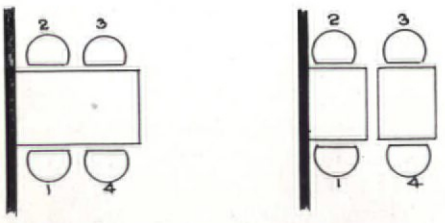
Where tables are placed on raised floors, or in mezzanines, it is well to place outside tables diagonally with the railing, as four-seated tables can then be used with space economy, and there is no danger of food or dishes accidentally falling through the railing. A diner seated parallel to a railing is likely to linger over his meal, watching action on the lower floor.

Wall benches have been used very extensively in European restaurants for some time. They are being introduced in this country and are proving to be quite popular in restaurants of the more social type. They occupy less space per person than tables for two but are not as economical of space as a table for four persons when located at an angle to the wall. However, they are objectionable for several reasons. A woman sitting on a bench will think nothing of occupying extra space with her hat and bag, whereas she will pick up her belongings when they are on another chair. Also it is easy to forget articles placed on a bench and perhaps most important, benches are hard to keep clean.

Booths will be found to be economical of space, but while they are popular in many restaurants, the experience of owners has been that they are not desirable in a type of restaurant where a quick turn-over is desired, as patrons, especially young couples, are inclined to linger over their meal. For this reason they should not be used in tea rooms or soda fountain lunch rooms which, because of location and rent, must have a high turnover of customers. Variety may be obtained by altering the table sizes to accommodate from two to six persons.



Tables placed at an angle occupy less space than when placed parallel.



Plan A **Plan B**

Two couples will occupy tables in Plan B while two separate parties will not occupy table in Plan A unless all other seats are taken.

TABLE-SERVICE RESTAURANTS

Since the main advantage of the waiter-service restaurant as compared with other forms of food service is not economy or speed but more pleasing surroundings and better service, full advantage should be taken of these factors in designing this type of service. The value of providing attractive surroundings is well recognized, but the influence which proper planning will have on the quality of service is frequently overlooked.

Sometimes when an exclusive type of patronage is desired, elements enter into the problem, over and above the requirements of good service in pleasant, comfortable surroundings, which are necessary to all good table-service restaurants. The restaurant might have the appearance of an exclusive and expensive place to dine. The architect can accomplish this by the use of materials, furnishings and embellishments exhibiting good taste.

DIAM.	SEATS	TABLE AREA PER SEAT
24"	2	1.5 ϕ
30"	3	1.63
34"	4	1.76
42"	5	1.92
48"	6	2.09
54"	8	1.98
60"	10	1.96
72"	12	2.35
84"	14	2.74
96"	16	3.14
SODA & SANDWICH TABLE		
26"	4	.93 ϕ

Area of table per seat per person accommodated at round tables of various diameters, allowing 18" to 20" per person.

COUNTER SERVICE RESTAURANTS

It is impossible to give rules for a counter layout since it is determined by the size and shape of the available area. In general the architect should strive to minimize movement. This requires a thorough understanding of the workings of a lunch room and a knowledge of the equipment used.

Counter Unit. Irrespective of the type of counter selected—straight, single or double horseshoe—it will generally be found that the counter or counters must be divided up into practically self-contained units of from 20′ to 24′ long. There are several reasons for this length.

In the first place it will provide standing or seating room for approximately 12 persons, which is the average that one waiter can serve with ready prepared food. If food or drinks are to be prepared by counter attendants, two or more men will be needed for the 20′ space.

In the second place, the soda and sandwich units require approximately 10′ each.

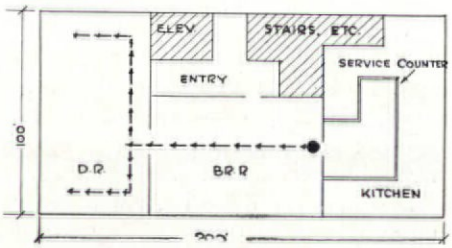
Thirdly, by having a complete subdivision into 20′ or 24′ units, confusion due to several waiters using same equipment is avoided.

There are three types of counter arrangements: the straight counter, the horseshoe or U-shaped counter, and the multiple horseshoe. The size and shape of the available space will generally be the determining factor in the choice of type of layout.

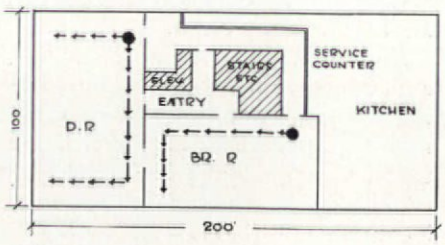
The minimum room width for a straight counter is about 15′, and for a horseshoe counter about 20′. Additional width can be used with both types by adding tables with waiter service.

The choice between supplementary tables and a horseshoe counter will depend of course on the probable class of clients. Generally, if the restaurant wishes to cater to women some tables will be desirable, whereas if the main appeal is to men, the counter should be preferable. With the installation of more comfortable counters and more attractively decorated lunch rooms and sandwich shops, the prejudice of women to counter service is being overcome to a considerable extent.

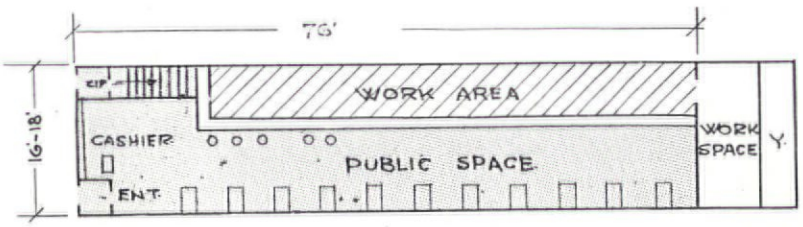
The multiple horseshoe type of counter not only gives a larger number of seats in a given space than can be obtained with the straight or single horseshoe type, but it improves the efficiency of operation because one waiter can be assigned to care for a single horseshoe, generally planned to seat twelve customers. With only one waiter to a unit, confusion is reduced and if the equipment is properly planned, the distance to be walked by the waiter is reduced.



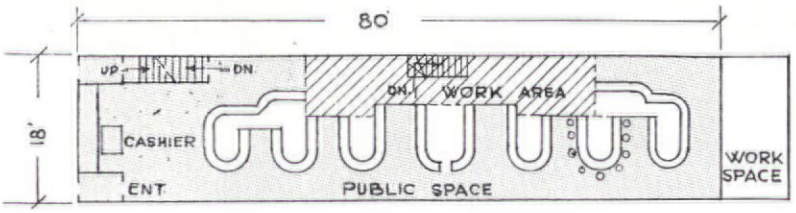
Poorly planned space in recent building. Waiters have to walk an excessive distance. A waiter near the kitchen can handle 12 patrons while one covering tables at end of dining room can only serve 6 patrons.



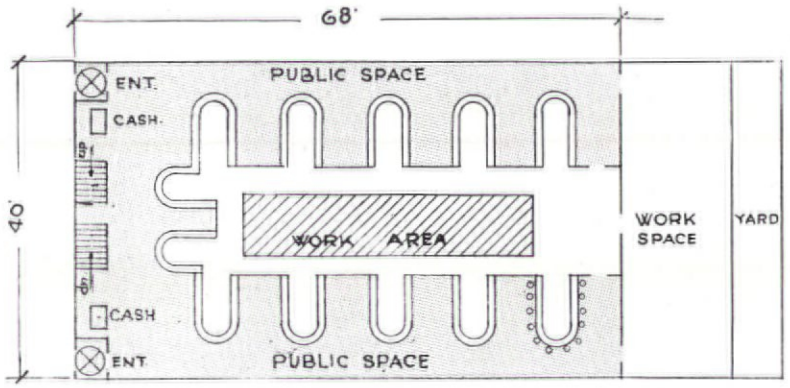
Above space redesigned to provide efficient waiter circulation.



Straight counter arrangement. Suitable for narrow rooms.

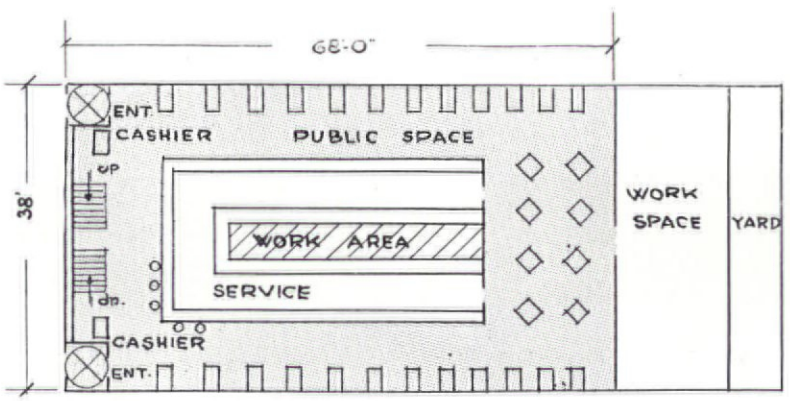


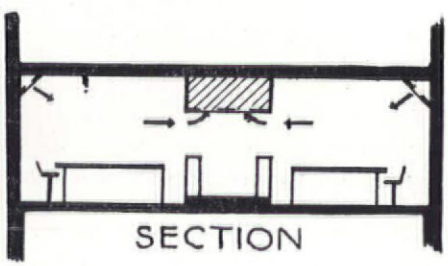
Multiple Horseshoe generally preferable due to increased number of seats and greater efficiency in service.



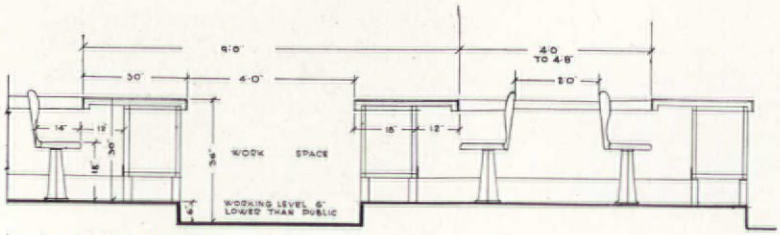
Double Multiple Horseshoe. Very efficient utilization of space. Twelve persons are generally the average per unit.

U-shaped counter for larger room with kitchen in center.



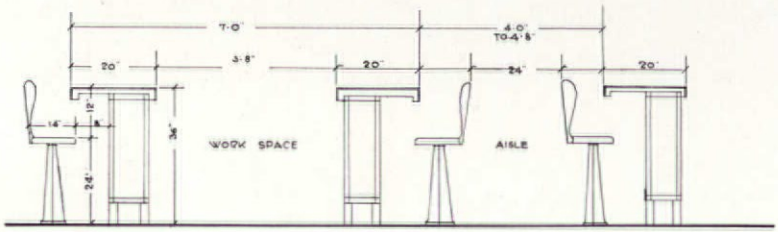


Ventilation through kitchen.



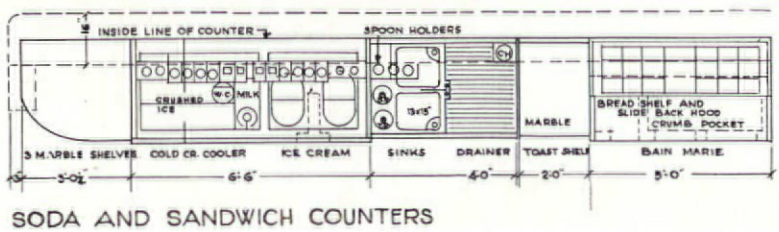
DINING COUNTER

Table-height counter, 30" wide with countersunk service floor, for attracting better class of patrons.



SANDWICH OR LUNCH COUNTER

Narrow top suitable for sandwich shop and quick lunch counter.



SODA AND SANDWICH COUNTERS

Units average about 10' in length. Counter length is increased by units generally in proportion of one sandwich unit to two soda units.

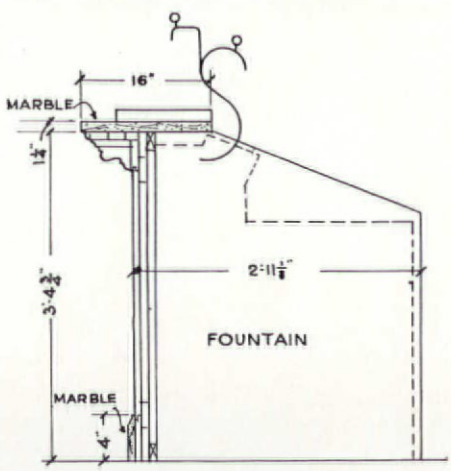
The horseshoe counter, which brings the customer within arm's reach of a waiter, is an efficient solution of the service problem. However, the problem is not wholly solved unless the same reasoning is applied to the planning of the entire room, counters and equipment. Each condition is a new and different problem.

SELF-SERVICE RESTAURANTS

The general principles of table arrangement, outlined above, apply to cafeterias except that spacing can be somewhat closer than in table-service restaurants. Commodious aisles should be provided for the main circulation, which should be carefully studied to avoid conflicting lines of traffic. Booths and alcoves are unsatisfactory in self-service restaurants as patrons should be able to see vacant seats from counter.

The seating capacity should be carefully studied as it will control the length of the counter. Since guests remain an average of 20 minutes at a table the hourly capacity of a dining room is three times its seating capacity. But it is always advisable to provide an oversupply of chairs (20 to 25%) in order to provide places for parties of two or more who are desirous of being seated by themselves.

Cafeteria guard rails forming aisles at counters should be at least 5' 0" from edge of trayslide.



SECTION THROUGH SODA FOUNTAIN

Counter dimensions are limited by effective arm's reach of the operator.

Where unrestricted access to the counter is desired, columns, tables and other obstructions should be kept at least 6′ 6″ from counter front.

Tables with supplies of silver and napkins should be located in line of traffic. Where tables are placed against walls of material that would show stains, chair rails are advantageous at table level to act as a mopping strip when bus boys clean off table.

Drinking water fountains should be conveniently located just off normal lines of circulation. Where balconies are used, a location near foot of the stairs has proven very desirable. Supplementary fountains should be placed on balconies and also on main floor when large in area. It is generally unwise to locate the water at a continuation of the counter, as a congestion there would hold up the counter traffic.

Where possible it is advantageous to locate the glass washing equipment contiguous to the fountain, as most of the used glasses are left at the fountain. Where glass washing is done elsewhere, it is essential to have sufficient racks to hold a plentiful supply of glasses. In some locations paper cups have proven satisfactory and economical. The fountain should have an ample-sized drain shelf to prevent water splashing on floor.



Rothschild

Drinking fountains should be off normal lines of circulation, but conveniently located.

Dairy lunch rooms come under the classification of self-service restaurants but serving a smaller variety of food than cafeterias. Since they have a capacity generally under 100, less counter space is required.

The orthodox seating arrangement which is employed in self-serve lunch rooms consists wholly of arm chairs. There are many variations, however, some operators using combinations of arm chairs and tables, and others working out a special type of seating arrangement by the use of narrow counter-height tables, with high stools, chairs or benches.

Cashiers' booths are usually located near entrance to control outgoing patrons. When cashiers also act as checkers in cafeterias the booth must be located at the end of the counter. The best location for the cashier, particularly when he also tends a cigar counter, is often hard to foresee, and booths should preferably be made portable so that adjustment may be made after restaurant circulation has been observed.

Coat and hat checking rooms or racks are seldom used except in table-service restaurants of better class. Hooks for hats should be placed under the stools or chairs, coat hooks on the walls, intermediate stands in large dining areas and, in addition, some counter-service restaurants have provided a second shelf under the counter where patrons can lay bundles.

SERVICE AREA

It is on the efficient locating and planning of this area that depends the speed and efficiency of the food service which, next to the quality of the food, is probably the feature most important to the patron.

1. *Table Service Restaurants.*

Handling of waiter traffic in service pantries or in hollow rectangular space in kitchen should be for right-hand (counter-clockwise) service, if possible. A subveyor or window for receiving soiled dishes should be located just inside entrance from the dining room. The range and boiler section should be located on the right; next to it

should be located the cold or pantry service; the pastry counter should be located on the opposite side and the checker's desk at the door. The center of the room should have shelves and heaters for silver, dishes and other supplies.

The aisle between the service counters must be made amply large to accommodate the number of waiters whom the dining room will require. For example, a dining room for 300 people will require 25 waiters and at least half of them will be in the kitchen at the same time.

2. *Counter Service Restaurants.*

Since *speed in serving* is the main advantage of the lunch counter as compared with other types of food service, every item in planning and design should be analyzed from this standpoint. It would be ideal if all items needed for a meal could be placed within arm's reach of a waiter serving a customer, but this is obviously impossible. It will be necessary to have a portion of the food at some distance from the waiter, either kept in a back counter, a back cooking counter, a kitchen separated from the lunch room by a partition or in the basement and connected with the lunch counter by dumb-waiters.

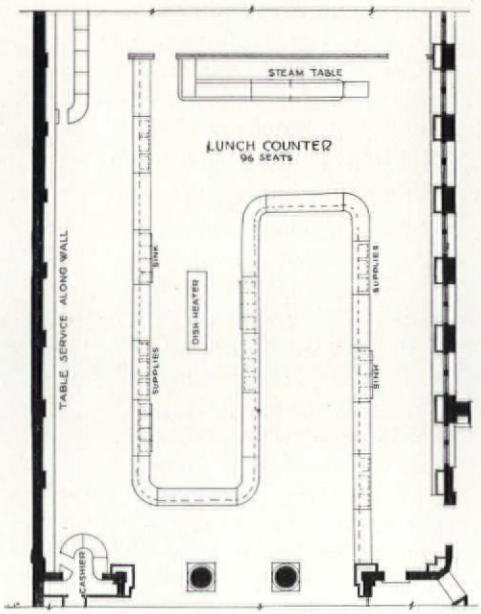
The counter should contain provision for the following items within arm's reach of the waiter:

A tray for clean water glasses.
A tray for clean cups and saucers.
Service plates.
Compartment trays for silver.
Hot plate for coffee pot.
A container for counter towels.
Tray of cream pitchers.
Ice compartment for drinking water and coffee cream.
Bus tray for dirty glasses.
Bus tray for dirty dishes.

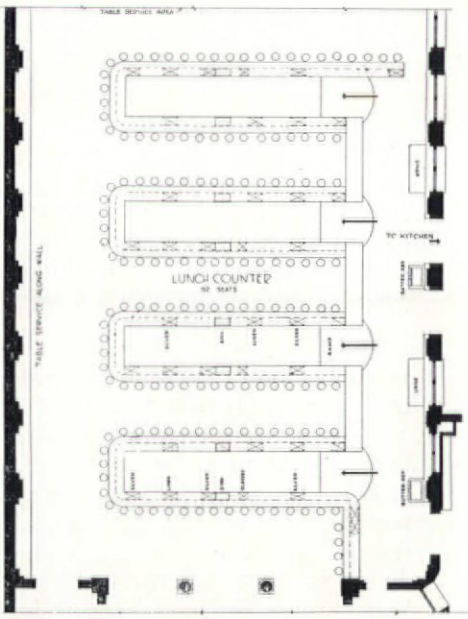
The ice compartments are located in the center of the unit to be easily accessible and all the equipment should be on the top shelf to minimize bending over and straining for the attendant. Bottom shelves can be used for surplus equipment. Shelves should be as open and clear as possible which makes them more easily reached and kept clean.

When *a showcase type of lunch counter* is used, salads and desserts may be kept in the front counter. There are two types of showcase counters: either a glass top counter with the food displayed underneath or a small glass enclosed showcase at the back of the counter. The glass top counter is not entirely satisfactory as the glass scratches chips or cracks and is quite noisy.

Rear counters are practically always used with soda lunches and with the straight type of lunch counter. This rear counter will contain the refrigerator, drawers or tilting bins for the storage of crackers, bread and hard rolls, shelf space for storage of sandwiches, screened or glass-enclosed space for pies, salads or desserts, toaster, coffee urns, etc., as well as space for the storage of linen, china and glassware. With the horseshoe and multiple horseshoe counter there is a tendency to eliminate the back counter from within the horseshoe entirely, or place it at the end of the horseshoe or in the space connecting the various units in the multiple horseshoe. Two feet wide and three feet high is standard for back counters. Where long back counters occur, service and equipment units should be duplicated every twenty feet.



ORIGINAL PLAN: 96 SEATS



NEW PLAN: 152 SEATS

SAVARIN LUNCH COUNTER PENNSYLVANIA STATION, N. Y. C.

Restaurant service greatly improved by use of multiple U-plan counters. Service simplified and 56 additional persons accommodated.

Sandwich Shop. The requirements for the sandwich counter are but very slightly different from those for a lunch counter. No room needs to be provided back of the counter for bread or crackers but otherwise there is no major difference. In the sandwich shop the kitchen is generally entirely eliminated, aside from provision for washing dishes. Sandwiches are made at a service counter in the lunch room.

Counter Construction. Counters may be had in wood, marble, glass, tile, metal and several synthetic materials.

Counter tops also may be had in a variety of materials. The choice will depend at times on the class of trade catered to. Rubber is the quietest but it is subject to damage from some acid fruit juices and certain soaps or cleaning fluids, and unless specially treated it will show burns from cigarettes. Linoleum is quite similar to rubber but requires the application of a finish to keep it looking well. It is also damaged by cigarette burns. Formica is not damaged by cigarette burns nor fruit acids and has many advantages as a counter top but it is not as quiet as rubber or linoleum. Glass is noisy and is easily scratched and chipped. Marble is noisy and discolors readily if light in color. Wood is seldom used as a counter top as it is too easily marred and damaged.

The counter may be mounted on sanitary legs or have a baseboard.

3. *Self-Service Restaurants.*

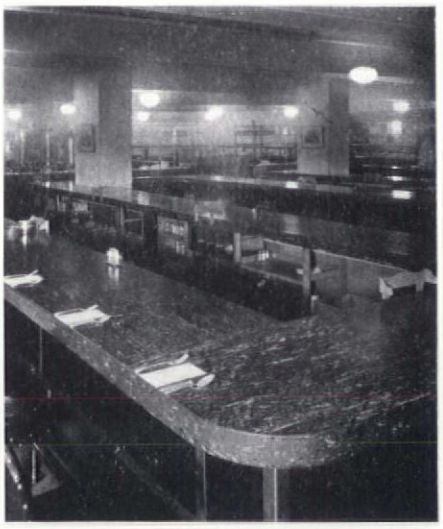
The counter should not be started too close to the entrance, since no successful cafeteria is able to handle patrons as fast as they arrive during the rush hours, and they must be provided with a space inside the room to stand during this waiting period.

The counter should be placed in front of the wall separating the dining room and kitchen. This enables service slides and doors to be arranged conveniently for bringing replenishments to the counter. The counter should be used for service only and is not intended as a place for preparation. Even the cutting of cakes and pies should be done in the kitchen. Unless the kitchen must be far removed, no equipment for preparation should be placed back of the counter on the dining room side. If it is necessary to have these service supply stations because of a remote kitchen, it is better to build a service pantry back of the counter, fully partitioned from the dining room.

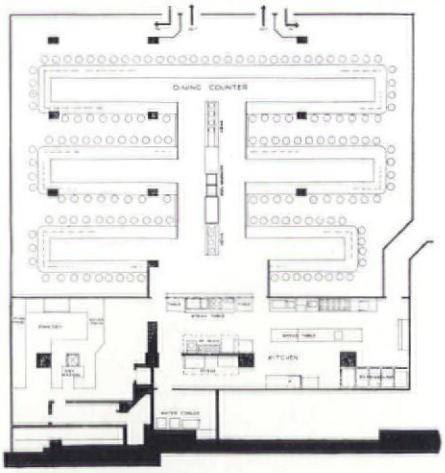
Length of Counter. It has been discovered from experience that increasing the length of service counter above approximately 75′ will not increase either the number of people served or the check average. Two lines should be installed if the capacity of the dining room is greater than can be handled by one line. One hollow square 80′ long will require two aisle type counters on each side of the room, meeting at the center with an elaborate cold display serving both lines. The hollow square eliminates halts in the line due to indecision on part of patron or slow service at any one point. The hollow square type at Bamberger's replaces one having a 7′ wide aisle which would have permitted patrons passing congested points but, unless the jam was serious, the customers would seldom get out of line.

An 80′ counter of the aisle type layout has a capacity of approximately 600 persons an hour and the hollow square approximately 900 an hour. Lesser lengths have capacities nearly proportional to their lineal feet.

Counters generally have four departments: (1) salads and cold meats; (2) hot meats and vegetables; (3) pastry and desserts; (4) ice cream, and cold and hot drinks. It has been found that an equal







RESTAURANT IN LOESER DEPARTMENT STORE, BROOKLYN

Layout by Duparquet, Huot and Moneuse

allotment of space to each of these four departments nearly approaches the ideal, with the steam table possibly getting a little more than its share.

There are differences of opinion as to the order in which they should appear but as a general arrangement the salads should precede the steam table, the pastry following and the drinks served last. The reason for this sequence is that since the slowest service is at the steam table the line is halted in front of an attractive array of salads where many orders are sold which would not be taken later. If the hollow square layout is used, a sandwich counter in the center of the square will be found an efficient arrangement.

A soda fountain, oyster bar, short-order range or other means of preparing any food or drink is generally not satisfactory as a part of the counter or on the dining room side of the wall back of it. Any preparation of orders along the counter delays the line.

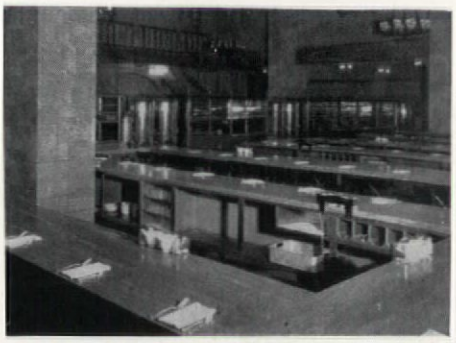
Cafeteria Counter Construction. Such fixtures as steam tables, cold pans, refrigerated cabinets, refrigerators, etc., should be built as separate units if the counter is to be faced with glass, tile or other materials which are affected by variations in temperature.

The recommended practice is to use 8″ sanitary legs for all cafeteria service counters. This offers sufficient space for cleaning underneath the counter. Some operators desire service counters to be installed with a base extending to the floor. This makes access to pipes difficult, and thorough cleaning is almost impossible. It is very important that pipes, when not installed under the floor, be kept at least 9″ above the floor to permit ease in cleaning. It should be remembered that the cafeteria counter handles food and that particles of food are bound to get underneath the counter.

The tops of steam tables should be planned to permit standardized variation and interchangeability of pan sizes. The accompanying details of the steam table to be used in Bamberger's cafeteria show how the pan opening may be divided into half or quarter sizes by the use of interchangeable units. In this restaurant they have found



Rothschild

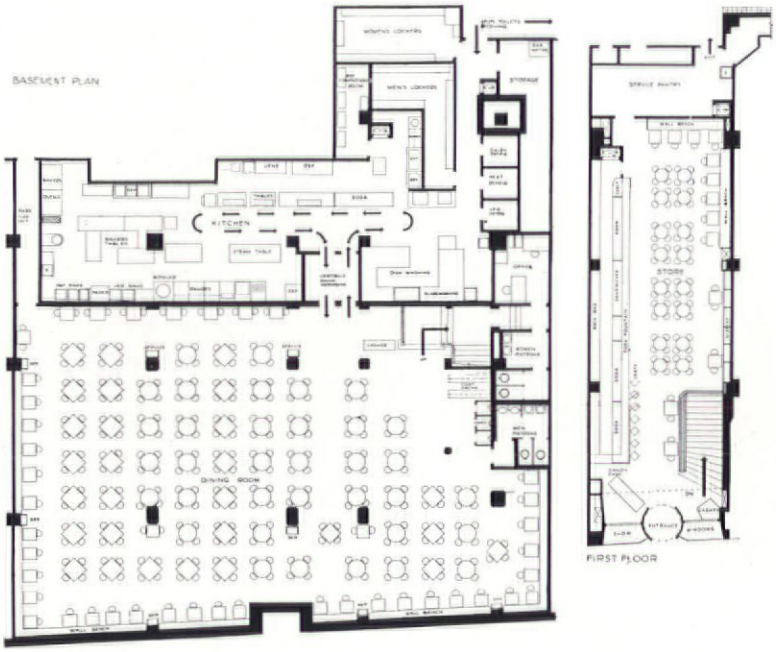


SAVARIN RESTAURANT,
GRAYBAR BUILDING, NEW YORK
A. P. JASPERSON,
RESTAURANT CONSULTANT

Counters at table height, 30″ wide, with service floor countersunk.

← Cafeteria Counter.

HORN AND HARDART
RESTAURANT
F. P. PLATT AND BRO.,
ARCHITECTS



ACKER-MERRALL RESTAURANT NEW YORK CITY

F. P. PLATT AND BRO.

Soda bar and light lunches on street floor; restaurant in basement, extending under sidewalk and adjoining stores. Note the service circulation in relation to kitchen functions.

that Monel metal pans with their tops flush with the top of the steam table are more satisfactory than the crockery type frequently used.

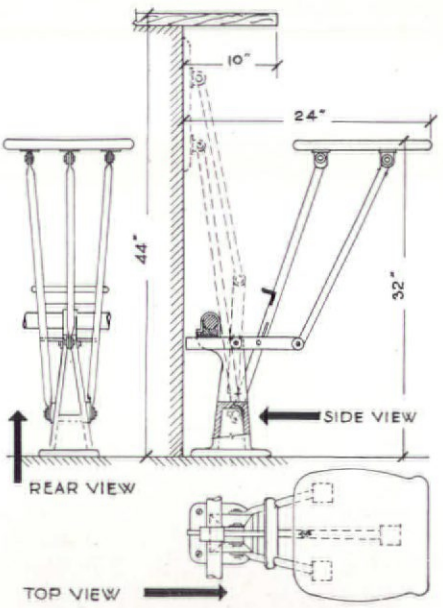
Cleanliness is greatly facilitated if the shelves under the counter are made easily removable, either as separate shelves or attached to legs with the whole unit easily portable.

The counter tops are subject to considerable variation. Glass is used a great deal but it has the disadvantage of being easily broken, not only due to wear and tear but as a result of the heating and cooling of parts of the counter. For this reason a large proportion of cafeteria counter installations now have metal tops, and for this purpose Monel metal has been found to be the most satisfactory.

Removal of Soiled Dishes. Wherever a basement is possible and expense permits, the automatic subveyor, centrally located and facing away from the front of the room should be installed. In addition to doing away with one of the most objectionable features of cafeteria operation, namely the stack of soiled dishes in the dining room and the noise of their removal from the room, a subveyor will in time pay for itself in the saving of breakage. By this means the dishes are delivered steadily in small quantities directly to the level of the soiled dish table instead of coming in boxes which are emptied in a manner which chips and breaks them rapidly. Even where the dish pantry is located on the same floor as the dining room, conveyor belts at the side of the room, or extending up to ceiling and down, or below the floor and up, are now being installed and operated with much better satisfaction than can be obtained with the truck.

WORK AREA

The work area may require from 25% to 50% of the total gross area devoted to dining and food preparation. This area will include, in addition to the kitchen portion, store rooms, refrigeration machine rooms, receiving room, help's lockers and toilet rooms, ventilating equipment room, dish and silver washing, etc. The kitchen itself very often will occupy an area equal to 15% to 25%



DETAIL OF COUNTER SEAT AMERICAN RESTAURANT IN BERLIN

Design patented by R. E. LEDERER
(See pages 242-246.)

of the dining room area. The accompanying table gives typical examples of floor space requirements. Very large restaurants find it necessary to provide a far larger relative kitchen and work area, because the menu is usually much more extensive as is also the amount of space devoted to bakery, ice cream making, storage and other sub-departments. For instance, the Palmer House in Chicago has 40,200 square feet of work area (including storage, etc.) as compared with 43,842 square feet occupied by their dining room.

Location of Work Space and Kitchen. The work area, from the standpoint of efficient operation of the restaurant, should be located directly adjoining the dining room, but on high priced land this will not always be economically desirable. On land exceeding $100 per square foot (that is, a potential rental of $6 per square foot) it will generally be advisable to provide for the kitchen in the basement or on mezzanine floor. It may be possible to effect a compromise by having store rooms, storage refrigerators, food preparation rooms, bakeshop, and at times the dishwashing department, separated from the main service kitchen and placed on another floor. This, of course, is only feasible if there is excellent provision for transportation of supplies, food, etc., between the separate parts of the kitchen. In such a case a scheme should be worked out as an individual problem with a competent architect and consultant.

Use of Basement Space. There are three methods of making use of the basement space directly under a restaurant. The first, using it for store rooms and storage refrigerators, offers no particular complications to restaurant operations if adequate facilities are provided for conveying large boxes, etc., into the basement and from the basement to the kitchen.

The second method is to use the basement for both storage and the dishwashing department with conveyors or subveyors to dining or lunch room. There are many advantages to be gained from this segregation of the dishwashing department which is always a disturbing factor in the kitchen, both because of its noise and because of the space it takes up in the line of service.

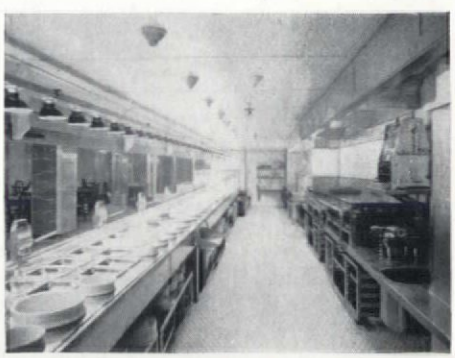
The third method is to locate the entire kitchen in the basement. This is generally undesirable but where land is so expensive that it must be done, provision should be made for ramps, conveyors, and stairs with easy rise and tread.

Lighting, Ventilation, etc. Natural lighting is always desirable and sometimes local laws make it compulsory. Kitchen windows should have at least four feet clearance between the window apron and floor.

No matter how small the room, the removal of air should be figured in an accurate manner, and fans of suitable size with ducts and vents properly located should be provided to insure clean, wholesome air at all times. In crowded city locations this often entails considerable expense, but without it any kitchen is a failure. Natural ventilation is fine, but every kitchen requires some assistance to remove the heat and fumes as fast as they are created. This is a case where the architect and the ventilating engineer must collaborate to bring about the desired conditions.

All buildings should be planned with allowance for a highly efficient ventilating plant with an ample intake and a proper exhaust for basement and first floor area. If these two are not properly provided for restaurant cooking odors will find their way into other parts of the premises, a condition which can be avoided.

It is to the advantage of the other building tenants as well as the restaurant space to have this properly cared for. All air should



Restaurant at 1447 Broadway, New York, illustrating the replacing of ordinary ceiling outlets by new type reflectors.



SAVARIN RESTAURANT,
N. Y. LIFE INSURANCE CO.
A. P. JASPERSON, RESTAURANT CONSULTANT

Flush lighting in ceiling over cafeteria counter.

move in the direction of the counter and kitchen to avoid odors in restaurant.

The entire range and broiler section, including the steam kettles and steamers in the rear, should be located under a special hood with carefully graduated openings in a perfectly balanced ventilating system to insure a uniform change of air at all points and to remove food odors. This is necessary because otherwise the intense heat of the ranges becomes unbearable, and it is impossible to keep people working in front of them. This canopy should be fitted with gutters pitching to one point where a pipe takes away the condensation. It also should be fitted with abundant lights which serve the double purpose of assisting the cooks in their work and calling attention to any collection of dirt so plainly that it will be removed before it can fall into the food.

Cleaning, Sanitation and Maintenance of Floors, Walls and Ceilings. The flooring most generally desirable is of red quarry tile separated by ¾″ binder strips. Floors should be pitched with frequent drains. Equipment legs must be planned to take care of different levels due to pitch of floor.

Drainage for a kitchen should be given careful attention. The entire system should be run through a grease trap before entering the main sewer, and individual water-cooled grease traps should be provided for the dishwashing machines and pot sinks. Particular attention should be paid to the water from the vegetable peelers on account of the large amount of sediment from this machine. The strainer usually provided with the equipment will remove a large portion of the coarser peelings, but this drain should have a short run and should be given a very good pitch until it reaches the main sewer where there will be sufficient flow at all times to keep it from clogging.

Tile or white enamel brick walls are best, with painted hard plaster a second choice. However, these are not practical in small passages and corridors where service trucks are used. These wainscots should be surfaced with painted heavy gauge galvanized iron

or Monel metal. All exposed corners should be bound with strips of heavy metal for protection and there should be a cove base of tile or terrazzo, with rounded corners, as an aid in sanitation.

A ceiling height of 18′ is recommended but as low as 14′ is practical. Lower ceilings are less desirable since they cause various complications. It is often advisable in large kitchens to cover the walls and ceiling with sound-deadening material because discordant noises make for confusion, increase breakage, and in general cut down the efficiency of the employees.

Provisions for cooking and preparation of food are only a small part of the problem of a properly designed kitchen and work area. Detailed attention must be given to the problems of (1) receiving, storage and routing of food and supplies; (2) refrigeration; (3) cooking and preparation of food; (4) provision for employees.

Receiving, Storage and Routing of Food and Supplies. In the arrangement of the work area the first consideration must be given to the receiving room which must be located convenient to the receiving platform and to the store room and storage refrigerator, or in smaller restaurants, to the kitchen.

For larger types of restaurants doors to the receiving rooms and corridors leading to the store room should be wide enough for two trucks to pass. Wherever the goods are to be weighed there should be room to sort and inspect at leisure. There must be room for large tables, a platform, counter, and hanging scale, and rooms for trucks to load easily.

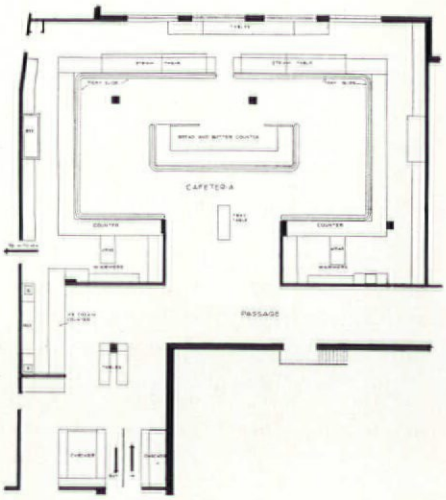
If the store room is on a floor lower than the street, it will be necessary to have elevators, chutes or a conveyor to bring the merchandise into the most convenient part of the receiving room.

Facilities for storage of china, silver, glassware, linens, cleaning supplies and similar materials must be provided in addition to the food storage.

Refrigeration. In general there are three classes of cold storage. In the larger restaurants there is generally what may be called "dead" or "long time" storage for meats or other products bought in quantities. There are also the kitchen or live storage refrigerators and then there are the service or counter cold tables and refrigerators for keeping food cold while waiting service. In soda fountain lunch rooms and restaurants of the smaller types there will be probably only the one refrigerator which will serve for both live storage and service refrigerator, although there is an increasing tendency in some of the dairy lunch rooms to have a refrigerated service counter for keeping salads fresh and cold.

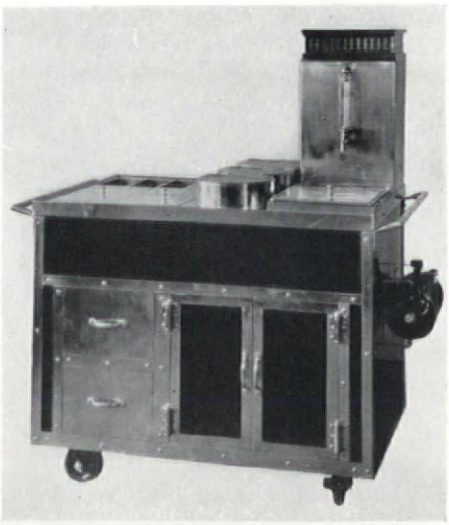
The size of storage refrigerators will be governed by the location and the facilities for speedy and frequent deliveries. They can scarcely be too large. Even though economy must be practiced, good practice should never permit a slighting of quality, as this will invariably prove expensive in the long run.

If the restaurant proprietor owns the building or has a long term lease, cork-and-cement construction may be used for large cold storage rooms. The most common construction is the sectional wood refrigerator which can be taken down and put up again if the occasion requires. If this is used, the walls should be at least 6″ in thickness and consist of two thicknesses of lumber, four thicknesses of insulating paper and 4″ of corkboard. Spruce forms the best lumber for interiors, except for the floor which should be of oak. Ash or oak, painted or varnished, are generally used for exteriors. The boxes are usually lined with galvanized steel.



Plan by Duparquet, Huot and Moneuse Co.

Hollow-square cafeteria counter which speeds self-service.



Unit developed for amusement park service which may be used as a supplementary serving unit in large dining rooms. Designed by Albert Pick-Barth Co.

According to the size of the place, two or more service boxes should be conveniently placed in the kitchen. These boxes range from 4′ to many feet in length and have service doors opening directly to the shelves. There should be as many boxes as there are separate departments in the kitchen. It is unwise to let the chef, baker and pantry man try to operate from the same refrigerator. These boxes, to avoid clumsiness, are sometimes made with thinner walls but they should never be reduced to less than 4″.

Very little consideration is given today to refrigeration by means of ice, as it is far more economical and vastly more clean to use artificial refrigeration. Ammonia and carbon dioxide and sulphur dioxide plants are all common and each has its advantages.

Service Counter Refrigerators: Refrigerating china for ice cream, salads, etc., chipped ice for cold drinks, etc.

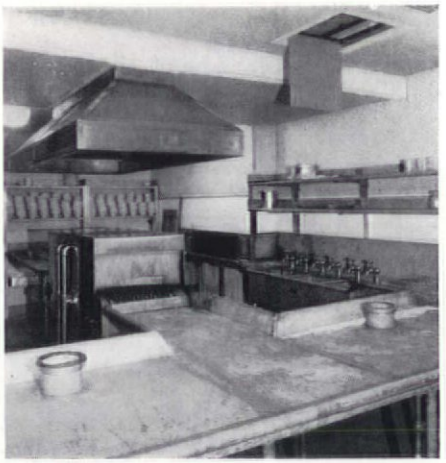
Cooking and Preparation of Food. Consideration should be given to having these supplies move forward to the various departments for preparation. There are five major divisions to food and service preparation: (1) range and broiler section, vegetable and soup cooking, vegetable preparation, butcher shop and scullery; (2) cold service and preparation divisions for salad, fruits, sea foods, ice cream and beverages; (3) bakeshop, ice cream making, candy making and similar preparation department; (4) dish washing; (5) live storage facilities, (pantry).

For larger restaurants the general scheme is to group the units with which waiters come in contact into a sort of hollow rectangle, all facing toward the inside. Within this hollow rectangle the waiters circulate. Outside of it the various preparations are arranged, each one if possible directly behind or near the section from which its products are served. Provision should be made on the outside of this larger rectangle for the efficient inter-departmental transfer and checking of supplies.

Cooking in the lunch room presents a very considerable divergence of opinion. The client will probably have very definite ideas on the subject. But it may be said that cooking should never be undertaken in the lunch room unless there is ample provision for mechanical ventilation. Featuring the cooking of some specialty such as spaghetti, buttercakes, griddle cakes, waffles, etc., has often been very successful commercially.

Kitchens for dairy lunches are usually very small owing to the fact that these lunch rooms are generally operated by chain systems which have central commissaries for baking, roasting and other heavy operations. At times the kitchen is designed like a grille, the short order equipment being set along the wall behind the service counter and ventilated by a high grade canopy. In all cases, the dishwashing is located in an enclosed space or in the basement.

The cafeteria kitchen, unlike that of the ordinary restaurant, should be entirely open with each department under the eye of the chef. There should be no service pantries for salads, cold meats or pastries as the dining room counters take the place of these in cafeteria operation. On the other hand, ample table space for salad and cold meat preparation, as well as large work tables for the chefs and for bread and pastry cutting, are essential. The partition separating the kitchen from the dining room should be provided with service slides at proper intervals. The use of basement space for the dishwashing, pantry, store rooms, storage refrigerators, and refrigeration machinery, vegetable rooms, help's quarters, etc., is very often



Dishwasher



Drucker & Baltes Co.

Kitchen Equipment

an aid to operation, and a means of conserving valuable main floor space. Aside from these special features, the cafeteria kitchen requires the same general equipment as is necessary in any other kitchen.

Disposal of Garbage. For the larger restaurant a holdover room with its temperature lowered from a connection made with the refrigerating system, and ventilated, is considered the best method. This permits a collection at convenient periods.

Cleaning, Handling, and Storage of Dishes. The sooner bus boys or waiters can deposit soiled dishes, the less the costs of handling. For this reason the place for receiving soiled dishes, whether it be window into dishwashing department or conveyor or subveyor, should be located as close as possible to the dining room and yet be properly sound insulated from the dining room and have efficient contact with the kitchen. Noise, steam and odors from this department must be kept out of the dining room and if possible out of the kitchen also.

The dishwashing and silver-washing departments must be compact without being crowded. A crowded condition makes for greater breakage and more noise. Ample space must be provided for the storage of dishes after they are washed and this storage space should be located conveniently for the routing of the dishes to the kitchen without crossing the incoming route. Provision should also be made for the proper cooling or heating of dishes for hot or cold foods.

MECHANICAL EQUIPMENT

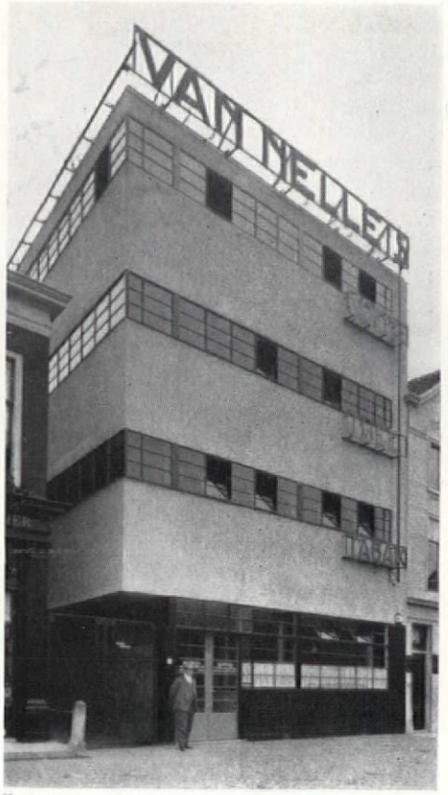
Cost Efficiency of Fuel and Power. The three fuels found to be most satisfactory are gas, steam and, at times, electricity. Coal ranges are fast going out of use as gas has practically supplanted coal as the most popular fuel.

Steam. Where steam is available, it should be used for heating urns, steam tables, warmers, kettles, meat roasters, steam cookers, raising temperature of water used for glass and dishwashing, etc. It is a more economical fuel than gas and is cleaner, less bothersome, saves space and is more generally satisfactory in every way. So valuable an asset is steam that it is often provided by a separate boiler for this purpose, operated either by coal or gas.

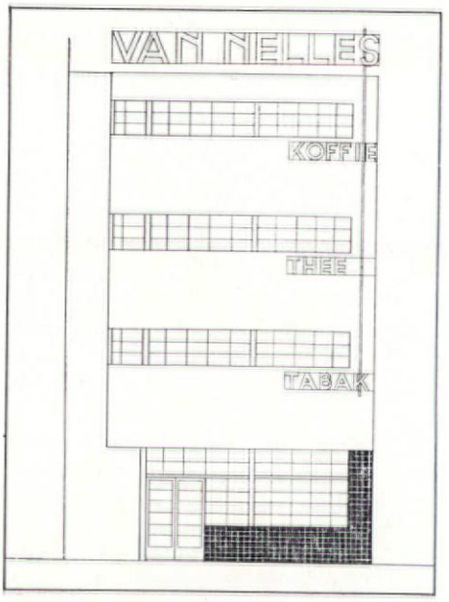
Oil. Some sections of the country have found oil practical for fuel, especially where crude oil may be obtained at a very few cents a gallon. This should be approached with caution, however, as it involves the use of special mechanical equipment, the reliability of which varies with different makes.

Electricity. With the development of large power stations throughout the country, electricity is coming more and more into demand for ranges, broilers, urns, steam tables, etc. (It is, of course, widely used for specialty devices.) For the cost of operation to compare favorably with gas it is necessary that the current cost be not over 2 cents per kilowatt as compared with gas at $1 per 1,000 cu. ft. Such power rates are frequently offered by the large companies in the principal cities to induce customers to install this type.

Hot Water Supply. The absence of an adequate hot water supply has caused more dissastisfaction with dishwashing and other cleaning machines than any other one factor, and whereas a larger boiler requires a little additional expense at the start, it is money well spent in the end.



Kamman



COFFEE SHOP AT SCHIEDAM, HOLLAND

J. A. BRINKMAN and L. C. van der VLUGT, Architects.

CHECKING LIST OF RESTAURANT REQUIREMENTS*

EXTERIOR
- Materials: (front, rear, sides, courts, penthouses).
- Walls:
- Roof:
- Windows: no restaurant windows except street walls.
- Doors: restaurant entrance doors to be revolving or auto-balance.
- Skylights:
- Special: restrict extent of tenants' signs and awnings when part of building is sublet to tenants other than restaurant operator.
- Color: (indicate).

ENTRANCES (Revolving Doors)
- Type:
- Dimensions: 7′ 0″ wide; 7′ 0″ high; secondary revolving door, if any, 6′ 0″ diameter.
- Finish:
- Floor—terrazzo; 1½″ thick; divided into 18″ diameter center, and field quartered at 45.
- Border—terrazzo; 1½″ thick; 9″ wide; quartered on axis.
- Kickplates—bronze plates up to panel mold, on both sides of enclosure and on both sides of doors; hardware applied on plates.
- Enclosure—bronze, plate glass.
- Doors—Class A—bronze Kalamein; Class B—straight-oak; plate glass.
- Ceiling—
- Cornice—
- Roof—
- Hardware—each leaf 1 push bar; with plain bronze push plate 5″ x 18″ x ⅛″, beveled edge. Manufacturers standard top bolts, with cylinder locks on 2 leaves. Time lock.
- Color: (indicate).
- Electric lights—recessed in ceiling.

ENTRANCES (vestibules and emergency doors)
- Gate: folding gate in niche.
- Dimensions: emergency exit (for revolving door) —min. 3′ 0″. Slight step at bldg. line preferred with rev. door—pref. 2″, max. 6″.
- Finish:
- Floor—alundum terrazzo 1½″; pitch to step at building line.
- Border—
- Base—
- Walls—as much glass as practicable.
- Ceiling—
- Doors—swinging outwards, or D.A.; class A—bronze, aluminum, or other metals; B—white oak or wood selected.
- Electric lights—recessed in ceiling.

ENTRANCES

(Show Cases)
- Contents:
- Dimensions: top of glass not over 5′ 0″ above sidewalk.
- Finish:
- Floor—marble ⅞″ thick; polished.
- Walls—mirrors, waterproof felt-backed.
- Ceiling—acid etched glass.
- Shelves—plate glass, bottom shelf not over 24″; supports n.p. brass stanchions with adjustable brackets.
- Access door—preferably from inside-cylinder lock.
- Ventilation—sliding ventilator at top and bottom.
- Electric—3 elec. lights in ceiling above glass.

(Marquise)
- Dimensions: Roof to pitch to bldg. line. Lowest point not less than 10′ above sidewalk.
- Finish:
- Signs—on 3 faces, illuminated; ventilate lamp boxes and reflectors to prevent cracking of signs.
- Mechanical:
- Plumbing—leader connection.
- Electric—provide outlet for 3 signs illuminated; access to lamps.

ENTRANCE: (basement stair)
- Dimensions:
- Minimum at 1st floor—10′ wide.
- Doors—5′ x 7′, double acting, set back 3′ 0″.
- Finish:
- Risers—marble.
- Strings—marble.
- Treads—precast alundum terrazzo, 1½″ thick, ½″ bed, pitch ⅛″; 6′ 0″ limit single width; stagger joints.
- Platforms—precast alundum terrazzo.
- Street landing—terrazzo.
- Bottom landing—same as dining space.
- Sign over stair—bronze frame.
- Mechanical:
- Electrical—outlet for sign over stair; separate circuit.

CASHIER'S BOOTH (Stationary)
- Contents:
- Cashier's seats—two.
- Safe—1′ 11″ x 1′ 9″ x 2′ 4½″ high; anchor to floor.
- Heater—electric.
- Oscillating fan.
- Reflector.

*Excerpts from list developed by F. P. Platt and Bro., architects.

Manager's call bell.
Telephone.

Finish:
Floor and Border—same as dining space.
Base—exterior white oak, bronze plate 7½" high; interior oak.
Wainscot—quartered white oak; 3-ply stiles and rails; 5-ply panels with grain horizontal; steel bracing.
Counter—marble; bronze flap over safe.
Super-structure—white oak uprights and cornice; plate glass panels; speak hole; bronze edge to curved opening; bronze brackets.
Ceiling—polished wire glass; sliding panels; sunken finger grips.
Cash drawers—2; monel metal lining with bill guards; drawer rest for open position.
Door—quartered oak; upper panel plate glass; bronze kickplate on outside.
Hardware—doors are to be fitted with spring latches controlled by knobs or handles from both sides and without stop work that would permit the latch to act as a dead bolt; in addition a dead bolt with a thumb turn on the inside is to be provided.
Color: (indicate).

Mechanical:
Electric—base receptacle for heater; wall receptacles for fan and reflector, wire for reflector in trough in cornice; conduit for telephone; wire call bell.

DINING SPACE

Contents:
Electric clock—discuss location with owner on each job; "Telechron" built flush with wall, numerals attached to wall, black metal hands; connected on separate circuit to A.C. light current; 19" diam. dial; hands stock design.
Cafeteria guard rail—monel metal, 2½" diam. 3' 0" high, 5' 0" min. from tray rail; posts 2½".
Tray rail—
Subveyor—or soiled dish opening.
Checker stand—
"No smoking" and other signs—
Umbrella stands—
Tables, chairs, etc.—
Silver, tray and napkin stands, metal counter stands.
Telephones—
Cashiers' booths—stationary; portable—approx. 6' x 4'—no connections.

Dimensions:
Live load 120#.
Minimum clear height at counter from under mezz. 7' 6".
Where columns occur in front of counters keep clear 6' 6" aisle.

Finish:
Floor—terrazzo; 1½" thick; polished; 16" sqs. set diagonally.
Border—terrazzo; 1½" thick; polished; 8" wide; no design.
Base—terrazzo; 1½" high; 1" radius cove.
Wainscot—marble; 4' 9" high; painted wipe band.
Cap—marble; molded, 3" high.
Main wall surfaces—plaster, painted.
Cornices—hard white plaster, painted.
Ceiling—sound absorptive material.
Fan blocks—white oak; painted or stained finish, 10" diam.; bottom 7' 0" from floor.
Color—

Mechanical:
Electric—each ceiling outlet on separate circuit; use minimum number of lamps per fixture; check location of mezzanine sign outlet with owner.
Oscillating fans.
Cashiers' Booth connections.

MEZZANINE DINING SPACE

Contents:
Rinsing sink—question owner.
Service closet.
Drinking fountain—number of faucets.
Cooling unit—located near fountain.
Subveyor—wood access doors.
Tables, chairs, umbrella stands.

Dimensions:
Floor load—100#.
Width of mezzanine—min. 10' 6" for one 4-seat and one 2-seat table. Always set 4-seat tables at railing, place diagonally.

Finish:
Floor—terrazzo, 1½" thick; polished; 16" sqs. set diagonally.
Borders—terrazzo; 1½" thick; polished; 8" wide.
Base—terrazzo; 6" high; polished; 1" radius cove.
Wainscot—same as main wall surfaces.
Chair rail—straight white oak; 2¼" x 1⅛"; top of ch. rail 2' 8" above floor.
Main wall surface—see first floor.
Cornice—see first floor.
Ceiling—see first floor.
Windows—casement; oak; amber glass; oak trim; silver gray green.
Fan blocks—see first floor.
Color—

Mechanical: see first floor.

WATER BOOTH

Contents:
Glass washing sink.
Glass washing machine.

Fountain tray.
Glass rack.
Wringer sink.
Water cooler.
Dimensions:
Finish:
Floor—2″ hex. tile, white.
Border—none.
Base—white glazed tile 6″; exterior same as dining space.
Wainscot—interior tile, 5′ 6″ above base; white, glazed, 3 x 6″; exterior same as dining space; walls exposed to public view to have marble wainscot.
Cap—interior tile.
Walls—hard white plaster.
Ceiling—hard white plaster.
Doors—none.
Mechanical:
Plumbing—no floor drain required except where glass washer is used.
Ventilating: no grilles, no vent required.

PUBLIC STAIRS
Contents:
Electric sign.
Dimensions:
Finish:
Risers—class A, marble, ⅞″ thick, polished; allow for liners if botticino; class B—steel.
Strings—same as risers.
Treads—precast alundum terrazzo, 1½″ thick; ½″ bed; additional tread at top.
Landings—precast alundum terrazzo, 1½″ thick, ½″ bed; stagger joints.
Rail—wrought iron, extruded bronze; center if width more than 7′ 4″.
Curb—same height and material as base around all stair wells.
Enclosure—only if required by law.

MEN PATRON'S TOILET ROOM
Contents:
Liquid soap dispensers and tank.
Toilet paper holders, mirrors, towel holders.
Towel basket.
W.C.'s.
Urinals.
Lavatories.
Dimensions:
Finish:
Floor—¾″ sq. black and white tile; 9T sq. black and 9T sq. white; pitch to urinals.
Border—3 rows of 1″ sq. black tile.
Base—black ceramic 4″ high, tile.
Wainscot—tile; 5′ 6″ above base; white glazed; 3 x 6″ (build in owner's sign).
Cap—tile.
Walls—hard white plaster; enameled.
Ceiling—hard white plaster, furred to cover ducts; enameled; hung ceiling 8′ 0″ from floor.
Partitions—between lavatory and toilet, same as walls.
Compartments—steel; no doors if shielded location; stand open and swing in if used; partitions, black glass.
Doors—bronze louvres in entrance door; no locks or latches.
Mechanical:
Ventilating—grille between lavatory and toilet. Grilles to ducts on ceiling where conditions permit.

WOMEN PATRON'S TOILET
Contents: same as Men Patrons' Toilet.

STORAGE CLOSET
Location: under stairs.
Contents: shelves as space permits.
Size:
Finish:
Floor—cement.
Base—cement 6″ high; coved around top.
Walls—cement plaster painted.
Ceiling—furred if space is too high or irregular in shape; hard white plaster if furred and painted.
Electrical: ceiling light.

DELIVERY ENTRANCE
Contents:
Stair to work space.
Dimensions:
Finish:
Floor—paving brick; 1¾″.
Base—red cement, 6″ high.
Wainscot—steel facing, or brick or concrete with protection L's at all exposed corners.
Walls—brick, concrete, or white plaster; painted.
Ceiling—concrete slab or white plaster; painted.
Doors—entrance doors wood, bronze protection plates inside, steel inside; no handles on outside of door; cylinder dead bolt with thumb turn inside; glass panels.
Mechanical:
Plumbing—sill cock, near entrance; drain valve in basement.

CAFETERIA COUNTER
Contents:
Menu boards—bronze frame.
Tray slide—brackets and bolts.
Steam table.
Cold pans.
Reflector hoods.
Ice cream cabinets.
Door.

Dimensions:
When no "T" uprights, wainscot secured to steam table framing.
Finish:
Base—exterior terrazzo, 1½" high, 1" alcove; interior, 6" high tile base.
Wainscot—exterior marble, ⅞"; interior unfinished.
Counter—monel metal, including edging.
Walls—exterior same as dining space; interior, smooth cement plaster except back of marble wainscot; where exposed to public view, tile or metal wainscot.
Cornice—exterior, same as dining space.
Doors—D.A., quartered oak; no saddle unless floor material changes; high bronze protection plate with moldings 2 sides.
Painting—exterior, see dining space; interior, wood and metal.
Mechanical:
Ventilating—
Electric: hood lights: twin outlets, 18" to 24" o.c., alternate circuits, pull chain, arranged symmetrically with glass panels; outlets in ceiling space 32" o.c.

SERVICE SPACE
Contents:
Refrigerator.
Dumbwaiter.
Wagon pan racks.
Urn table.
Work tables.
Sinks.
Bread slicing table.
Sandwich table.
Meat-cutting table.
Glass rack.
Heater.
Cup storage.
Pie racks.
Finish:
Floor—4" x 4" tile; only slight pitch to drains.
Base—tile.
Walls—smooth cement finish.
Ceiling—finish only in special cases; then smooth cement plaster.
Dumbwaiter enclosure—6" white glazed tile, base 10" gauge steel enclosure.
Painting—steel and iron enameled white.
Mechanical:
Ventilating—hood as large as possible to hold excess smoke and gas.

SERVICE STAIRS
Contents:
Dimensions:
Wherever possible make stairs 44" wide, without winders.
Finish:
Risers—steel stair construction.
Strings—sheet steel.
Treads—steel base, lead filled nosing, 4 grooves wide, applied to front of sheet steel tread, extending to 3" of strings; landings entirely covered, 6" sections.
Rail—pipe rail at stair and around well.
Curb—red cement 6" high.
Enclosure—omit if possible.
Walls—smooth cement plaster except where exposed to public view; in which case, tile.

RECEIVING SPACE
Contents:
Space for goods received before distribution; and for temporary storage of outgoing garbage, where no garbage room is provided.
Dimensions:
Finish:
Floor—paving brick, 1¾".
Border—none.
Base—cement, 6" x ¾", coved, beveled top.
Walls—smooth cement plaster; protection angles at exposed corners.
Ceiling—smooth cement plaster.
Mechanical:

GARBAGE ROOM
Remarks: only provided where excess amount of garbage is expected.
Contents:
Refrigerating coils.
Dimensions:
Finish:
Mechanical:

SIDEWALK ELEVATOR
Type: spur gear, manually operated from floor level; slack chain devices.
Contents:
Platform.
Machine.
Dimensions:
Platform—3' 3" x 4' 6" except where good reason for changing; access to both sides where possible.
Load capacity—1,500 lbs. approx.
Finish:
Sidewalk doors—light weight account manual operations, checkered steel plates.
Enclosure—wire mesh.
Gate—automatic, wood slat gate, sliding vertically.
Platform—wood.
Curb—steel angle at bottom landing.
Drain—gutter at sidewalk doors, leading to drain pit.
Bell—warning signal and signs.

STORE ROOM
Contents:
Racks.
Electrical equipment.
Testing lamp.
Dimensions:
Finish:
Floor—paving brick, 1¾″ thick.
Border—none.
Base—red cement, 6″ high, coved, ¾″ thick, beveled top at walls.
Wall surface—smooth cement plaster; painted.
Enclosure—2½″ sq. tubular posts; filler pieces held in with small continuous stops; bottom sections, steel plates; top sections, wire mesh.
Door (sliding)—entirely of wire mesh with no provision for wicket; counter flap to fold across opening during day time; Vitritile walls to be used where equipment is placed against store room walls.
Ceiling—smooth cement plaster, except where story height is excessive, then use wire mesh.
Mechanical:
Electric—wall receptacles for equipment.

MAIN REFRIGERATOR
Contents:
Food compartment.
Ice compartment.
Coils.
Ice crusher—with super-service cord and Kliegel plug.
Dimensions:
Finish:
Sub-floor—concrete, 6″ below floor level; waterproof if above occupied space.
Base—exterior, red cement 6″ high, square top, continuous under doors.
Finish—all other exterior finish, construction and all interior finish by box manufacturer.
Coils—refrigeration machine contractor.
Mechanical:
Electric—vapor-proof lighting fixtures; provide outlet for ice crusher in front wall of refrigerator; starting box and switch.

REFRIGERATION MACHINE ROOM
Remarks: ammonia mixing box in street.
Contents:
Motor.
Compressor.
Tank—provide foundation and supports for above when required.
Dimensions:
Locate as close to the main refrigerator as possible.
Provide space for pulling condenser tubes.
Door width to accommodate largest machine.
Finish:
Floor—cement 1″ smooth.
Base.
Walls.
Ceiling.
Door—steel faced; no louvres or glass panels; air-tight and always swing out.
Mechanical:
Ventilating—independent, direct positive exhaust to outer air.

KITCHEN
Contents:
Bain-Marie, hot.
Sink.
Griddle table waffle iron.
Roast oven.
Dumbwaiter.
Steam table.
Bread table.
Meat slicer.
Work table.
Glass rack.
Fan controller.
Potato peeler.
Dimensions:
Preferred clearance in passages 5′ 0″; never less than 4′ 6″.
Finish:
Floor—paving brick, 1¾″ thick.
Border—none.
Base—red cement, 6″ high, coved, ¾″ thick, beveled top.
Walls—smooth cement plaster; use Vitritile back of kitchen griddle where possible or Vitritile furring.
Dumbwaiter enclosure—steel sheets.
Partitions—metal lath and smooth cement plaster; doubled where pipes occur.
Ceiling—smooth cement plaster.
Mechanical:
Ventilating—hood as large as possible to hold excess smoke and gas; use copper hood when covering equipment exhausting steam; where no steam use Toncan metal.

DISHWASHING SPACE
Contents:
Subveyor.
Washer.
Garbage receptacle.
Silver burnisher machine.
Silver drying table.
Silver washer.
Clean and soiled dish tables.
Heavy duty sink.
Tray sink optional.
Soak sink.

Dumbwaiter.
Work table.
Dimensions:
Finish:
Floor—paving brick, 1¾" thick.
Border—none.
Base—red cement, 6" x ¾", coved, beveled top.
Walls—smooth red plaster.
Partitions—metal lath and smooth cement plaster, 2" thick; doubled where pipes occur.
Ceiling—smooth plaster.
Subveyor enclosure—steel sheets.
Mechanical:
Ventilating—large size hood over dishwasher.
Plumbing—floor drains.

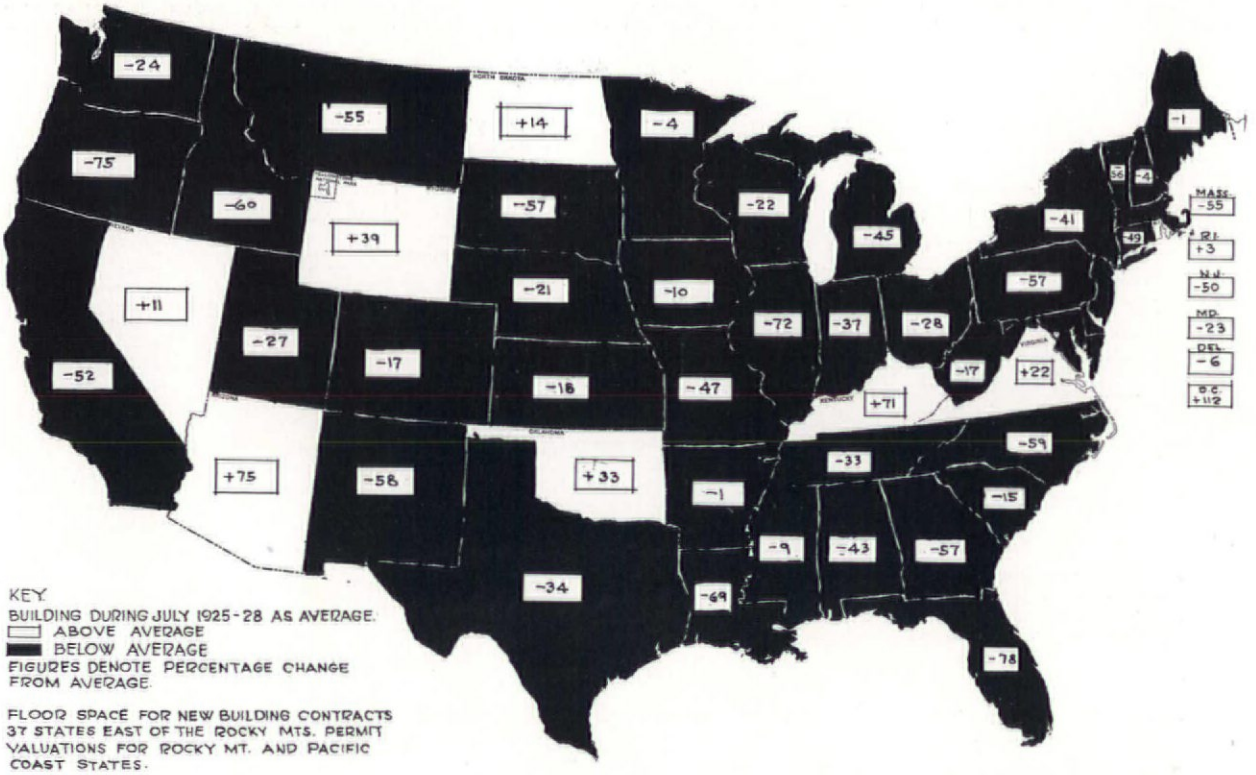
HELP'S DINING SPACE
Contents:
Tables.
Benches.
Dimensions:
Finish:
Floor—paving brick, 1¾" thick.
Border—none.
Base—red cement, 6" high, coved, ¾" thick, beveled top.
Walls—smooth cement plaster.
Ceiling—smooth cement plaster.
Mechanical:

FEMALE HELP'S LOCKER ROOM
Contents:
Lockers.
Cot—provide space.
Dimensions:
Aisle between double row lockers 9' 0"; single row 7' 0"; maintain a minimum clear height of 7' 0" under all pipes and ducts.
Finish:
Floor—1" white hexagonal ceramic tile (avoid raised saddles).
Border—none.
Base—6" white glazed tile.
Walls—smooth cement plaster.
Partitions—smooth cement plaster.
Ceilings—smooth cement plaster.
Door—hard wood, self-closing, no lock; raised 2" from floor, louvre panel, and grille above if necessary to equal exhaust area; steel channel frame, no trim.
Color—walls and ceilings painted; battleship gray dado, and white; doors and frames painted green.
Mechanical:
Ventilating—on toilet system independent of restaurant.

FEMALE HELP'S TOILET ROOM
Remarks: access not to be through locker rooms.
Contents:
W.C.'s.
Lavatories.
Liquid soap.
Dimensions:
Finish:
Floor—1" white hexagonal tile.
Steps—risers, treads, cheeks of paving brick; pipe railing.
Border—none.
Base—white glazed tile.
Wainscot—3" x 6" white glazed tile, 5' 6" high.
Walls—smooth cement plaster, painted.
Partitions—cement plaster; fixtures so arranged that a partition forming a vestibule can be installed in the future.
Compartments—steel, doors to stand open and swing in except where such arrangement causes waste of floor space.
Ceiling—smooth cement plaster.
Door—hard wood, self-closing, no locks, raised 2" from floor, louvre panel, and grille above if necessary to equal exhaust area; steel channel frame, no trim.
Color—floor and base red; walls and ceilings painted; battleship gray dado, and white; doors and frames painted green.
Mechanical:
Ventilating—toilet system independent of restaurant; ducts to be arranged so that a branch installation can be extended to future vestibule.

MALE HELP'S LOCKER ROOM
Contents: same as Female Help's Locker Room, except no cot.

MALE HELP'S TOILET ROOM
Remarks: access not to be through locker room.
Contents: same as Female Help's Toilet Room.



Gain in number of states showing improvement is largely offset by declines in actual volumes. Figures are based on building reports for July, 1930.

BUILDING TRENDS AND OUTLOOK

PROSPECTS FOR RESIDENTIAL CONSTRUCTION

It is residential building that holds the key to revival in the construction industry and through it recovery in general business. This is increasingly apparent from the record for the first seven months of 1930 as compared with the same period of 1929 because of the inability of a gain in new engineering work of 20 per cent to do more than feebly offset the effects of a declining building trend.

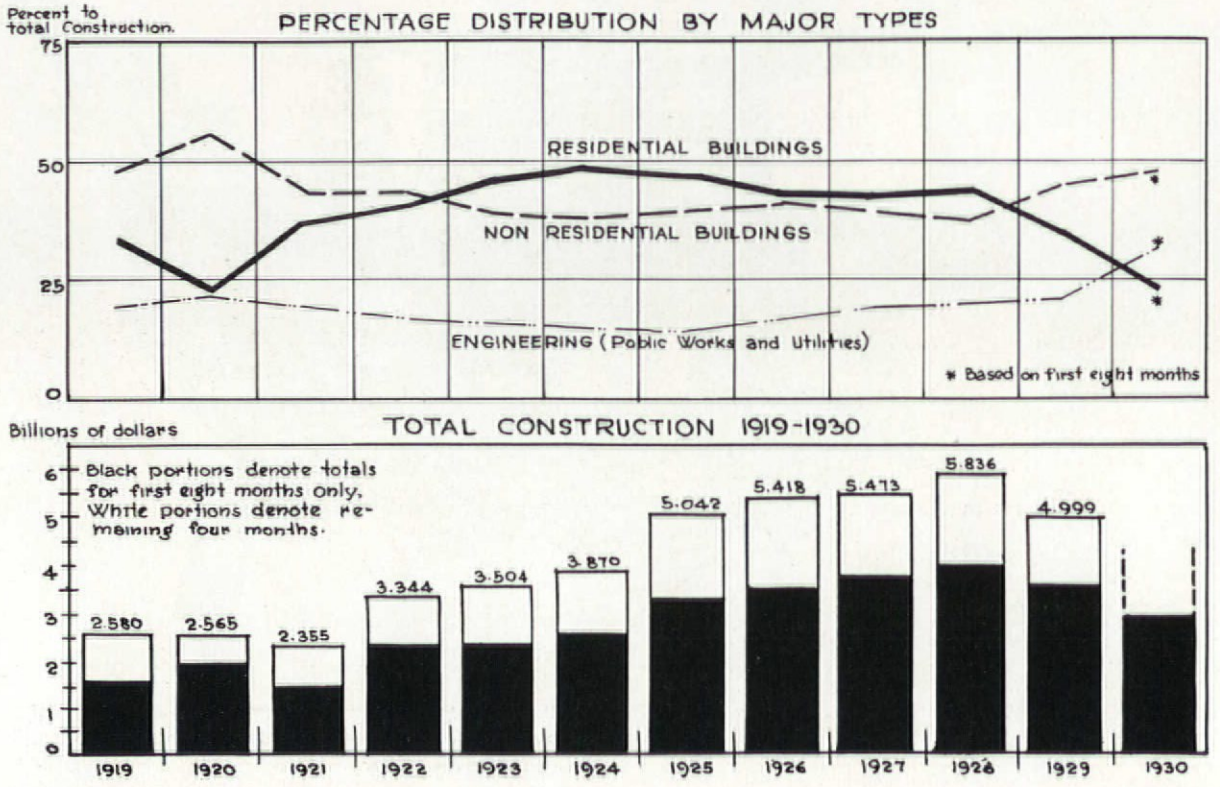
The large activity in the construction industry during the years following the depression of 1920–21 found its principal impetus in residential building. It will be recalled that this branch of the industry was retarded during the war years because of the urgent demands of industrial mobilization. And it was here that Rent Commissions throughout the most populous sections of the country, in their endeavors to prevent rental profiteering, artificially prolonged the period of housing shortages. On retrospect, capital could hardly have been expected to flow freely into new residential building with restrictions as to investment returns virtually dictated by the Commissions. Especially was this the case in 1920 and 1921 when funds invested in more liquid securities were on a relatively high yield basis and the purchasing power of the dollar thus derived from interest and dividends had measurably recovered from its low in the spring of 1920.

It is presumptuous to say what might have happened if fears of profiteering had not necessitated reprisals in the form taken. Though there doubtless would have been many evidences of temporary hardship to the wage-earner it would appear rather certain that free flow of capital for residential building would have enlarged the supply of housing in quicker satisfaction of the accumulated deficiency. Interruption in the untramelled operation of supply and demand, once the pegging influence of Rent Commissions was removed, brought forward a large number of small inexperienced builders and less responsible speculators whose products for the most part were those of the marginal producer so well known in the industrial world and which incidentally had no small part in the overproduction of housing from which we are now slowly recovering.

Fortunately the recession in building and business generally has in a large degree eliminated these

CONSTRUCTION CONTRACTS AWARDED IN 27 NORTHEASTERN STATES

1919—1930



factors, but not without large cost to business prosperity. For each of the years from 1922 to 1928, inclusive, residential building accounted for 40 per cent or more of the total new construction volume reported, reaching the maximum ratio of 48 per cent in 1924 and its largest dollar total in 1928, with a ratio to total of almost 44 per cent. On a dollar total twice as large as in 1921 the 1929 volume of residential building showed a ratio lower than in 1921; the 1929 ratio of 35 compared with 37 for 1921.

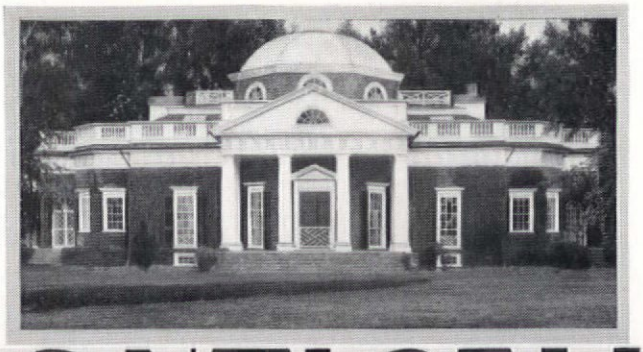
Based upon data for the first eight months it is likely that 1930, in dollar volume, will fall between the 1922 and 1923 residential total, the fulfillment of which would require a rather sizeable recovery in the closing months of the current year since we are now running measurably behind 1922. Relatively, residential building for 1930 thus far, with a ratio to total construction volume of about 22 per cent, is where it was in the depression year 1920, though the actual total for the eight months of 1930 was sizeably larger than that reported for the entire year 1920.

The July building map, based upon floor space of new building contracts, showed nine states (inclusive of the District of Columbia) where current volume was greater than is average for the month (July 1925–1928 inclusive taken as average): Rhode Island, District of Columbia, Virginia, Kentucky, North Dakota, Oklahoma, Wyoming, Arizona, and Nevada. Though the June map showed only six states, Vermont, Connecticut, Virginia, North and South Dakota, and Nebraska better than average, the spottiness of the current situation is emphasized by the fact that in July only Virginia and North Dakota were able to maintain the gains in current new activity evidenced in June. The effect of the gain in July in the number of states showing better than average was measurably offset by declines in actual volume in those states which failed to carry through their June gains.

The July dollar volume of new building, apart from engineering, undertaken in the 37 states east of the Rocky Mountains totaled $252,662,100. This was a decrease of almost 28 per cent from the preceding month and 45 per cent from the abnormally large record for July, 1929. New engineering work contracted for in this territory, amounting to $114,866,300, brought the July construction record to $367,528,400. This was a decline of 39 and 44 per cent, respectively, from the totals reported for the previous month and July 1929.

The volume of new building undertaken during the first seven months of 1930 totaled $2,041,937,000,

(Continued on page 94, advertising section.)



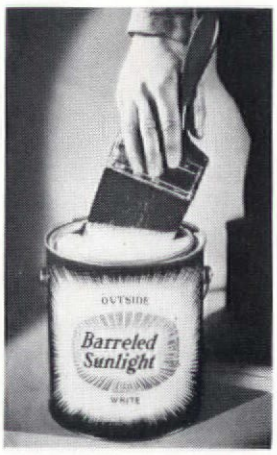
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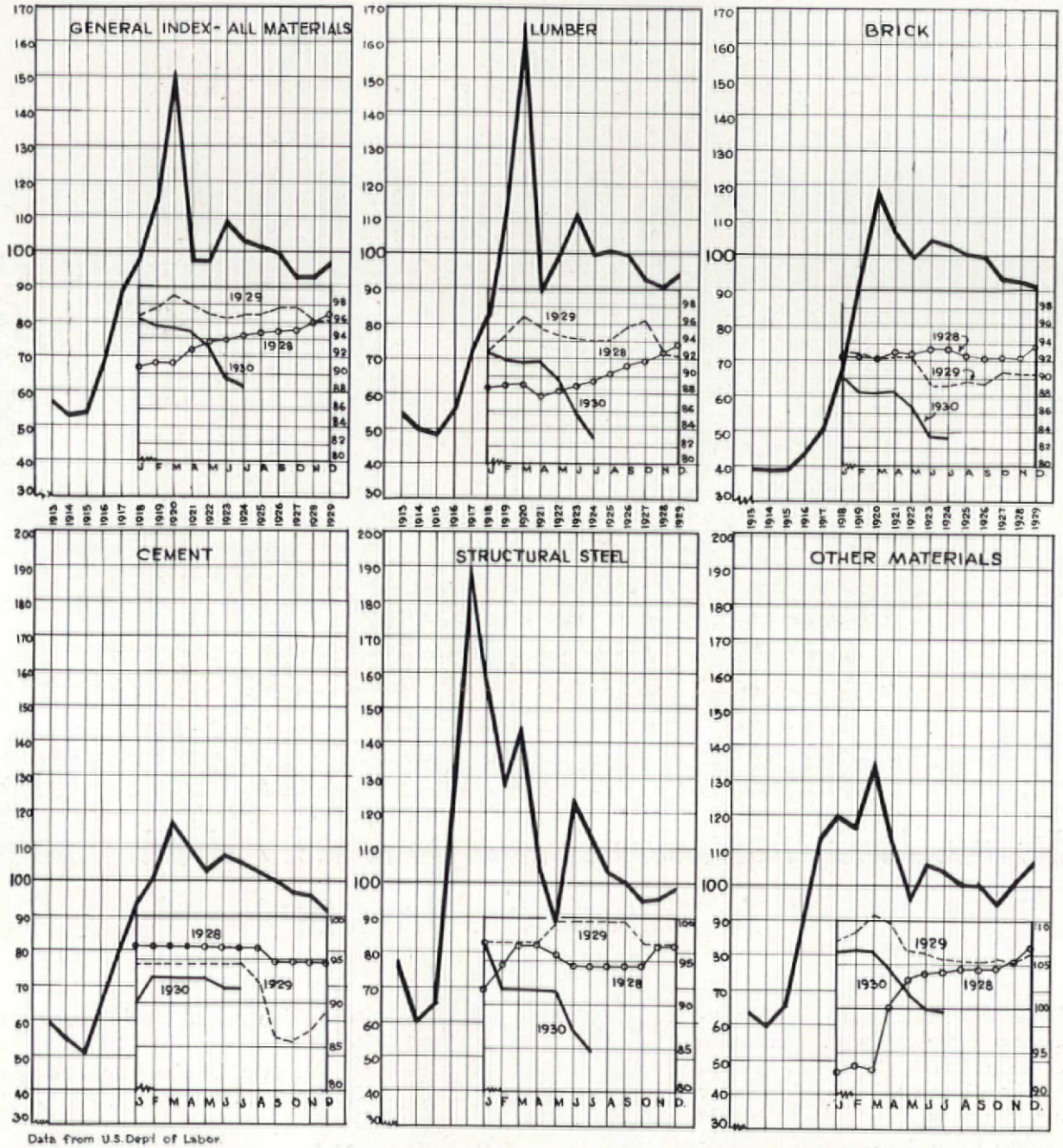
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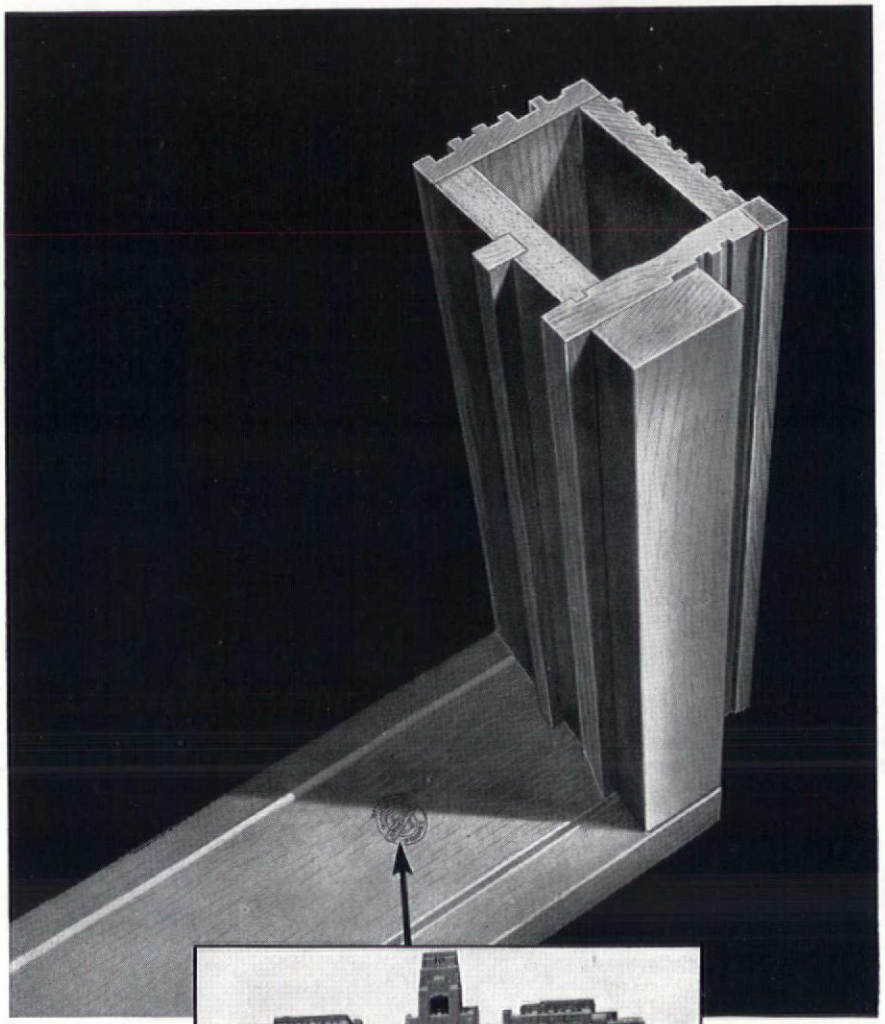
WHOLESALE PRICES FOR BUILDING MATERIALS

(1926 monthly average = 100)



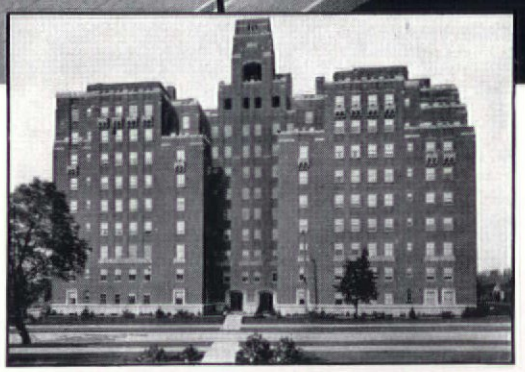
For the seven-year period from the beginning of 1913 to the beginning of 1920 the general index of building material prices was substantially lower than the general index of commodity prices. The largest divergencies in this period occurred during the years 1917 and 1918 when building material prices on the average were 25 per cent lower than the general commodity level reflecting the relative inactivity of building aside from that which was necessary for requirements of war. For the period from 1920 through the middle of 1922 the two movements were in very close agreement; from midyear 1922 through midyear 1924 building material prices were continuously higher than the general index; from that time to the middle of 1927 both moved within the same general range; since then and throughout 1928 building material prices were lower. Through 1929 prices for materials were higher while recent trends show building materials still above the general commodity index.

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FOR WEATHERTIGHT INSTALLATIONS—USE ANDERSEN SPECIFICATIONS

a decline of $823,000,000 from the corresponding period of 1929, of which $623,000,000 was in residential and $200,000,000 in non-residential building. Relatively, the decrease in residential building was likewise much more drastic than in non-residential building, the decline of 48 per cent in the former contrasting with a decrease of only 13 per cent in the latter. Although a gain in engineering amounting to $161,000,000 was registered, total construction for the first seven months, including engineering showed a decrease of 18 per cent from the corresponding period of 1929, the total for the first seven months of 1930 amounting to $3,005,542,000.

Prices for building materials continued to recede in July and in the early weeks in August in sympathy with the general trend in commodity prices. As a matter of interest the general index of building material prices compiled by the U. S. Department of Labor was lower in July than in any month since the autumn of 1917, lower even than prices during the depression of 1920–21. What is more, the persistent decline since October, 1929, has now amounted to 10 per cent, the largest relative decrease in so short a period since that recorded in the last depression from a much higher actual level. This decline in building material prices, aside from other considerations, is most intimately identified with the drastic decrease in new building which has been experienced in the past eighteen months. Materials particularly identified with residential building have quite naturally suffered more than those which find large use in other types of construction, paralleling the more drastic decrease in demand from a weakened condition in the residential field.

It would appear that the liquidation of the oversupply in housing, on a subnormal current new building volume, is nearing the point where better balance between supply and demand may be expected. Coupled with this is the growing interest on the part of architects, engineers, and manufacturers of building materials and equipment in research programs for the reduction of unit costs, particularly as applied to residential building. When liquidation will have run its course is difficult to foresee, but with the arrival of that period residential building should gradually regain its position of first importance and provide the basis for prosperity within the entire construction industry and business generally.

That residential building will be restored to its primary position during 1931 is to be seriously doubted. The difficulty in the present situation is not now so much one of high unit costs nor even of financing, of which much has been made, but rather the lack of balance between supply and demand which is nearing the zero point. This type of building activity in 1931 is quite likely to regain some of the ground lost in the past two years. On entirely different conditions, the relative position of residential building should be more nearly like the year 1919 when this type of construction was about one-third of the total. It would now appear that with known large supplies of money awaiting employment in new building activity and determined efforts at reduction in production costs, the stage is being set for the creation of large housing corporations, vying in size with many of our largest industrials, whose principal business will be the redevelopment of existing centers on a reasonable rental basis. That this can be done may be inferred from the loaning operations of life insurance companies on improved real estate which, until recently, were at a rate in excess of one-half billion dollars a year. These companies, in no small measure, provided a stimulus to building activity during the past few years little short of spectacular. Life companies since the beginning of 1923 have added more than three billion dollars to their mortgage investments on improved realty, both residential and non-residential, principally commercial. That the rate of loaning operations by these companies has been halved in recent months, though reflecting other considerations as well, would seem to indicate a retrenchment dictated by conditions within the building industry itself.

When residential building has been placed upon a firmer footing by the intelligent research now brought into play by numerous agencies, we may expect to see the life companies again active in financing, though perhaps on a different basis. More scientific town-planning is in the offing. The rehabilitation of blighted urban areas is receiving much attention. As these movements gain headway we may see some retardation in the spread of suburban developments in favor of a trend toward reconstruction of run-down areas. In this movement large-scale modern apartment house operations will provide the nearest approach to the mass production principle thus far devised though it is not unlikely that small residential types, where unit costs are materially higher, will also find a more modern adaptation of mass production than has hitherto been provided by party walls.

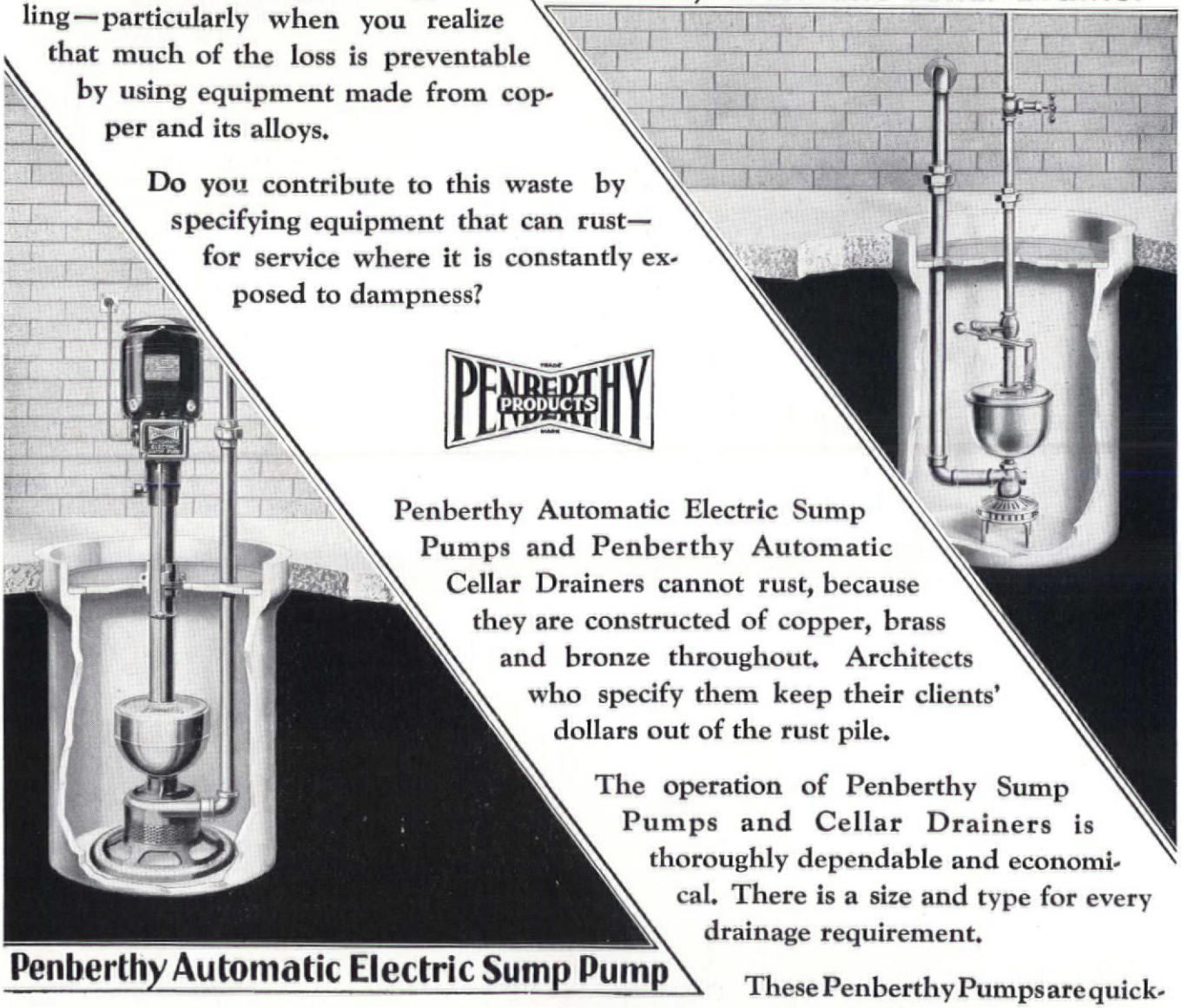
L. Seth Schnitman.

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BOOK REVIEWS

PRAESENS *Revue 1930*, Szymon Syrkus, editor, 38–13 Rue Senatorska, Warszawa, Poland; 199 p., 45 francs.

A yearly publication devoted to contemporary architecture, painting and photography. Plans and photographs of recent architecture in Europe, United States and Russia. Articles by Syrkus, J. J. P. Oud, Piet Mondrian, C. van Eesteren, and others. Of special interest is an article by Syrkus (in French): *Le Dynamisme de l'Architecture Moderne*, in which architecture is defined as the simultaneous function of social, economic, technical and plastic (time-space) factors. The significant influence of American construction methods on contemporary design is analyzed together with the relations of architecture to new social conditions and the modern plastic arts.

CONTEMPORARY DETAIL IN COMMON BRICK. Common Brick Manufacturers Association of America, Cleveland, Ohio.

A collection of thirty or more plates presented to the architects and designers of America as "an inspirational exhibit of contemporary brickwork practice." Much current work from Germany and Holland is included. The photographs and detail drawings emphasize, for the most part, brick patterns which are bizarre and complicated.

AMERICAN HOUSING. Edith L. Allen. *The Manual Arts Press*, Peoria, Ill., 1930; 211 p.; $2.00.

A history of American housing from the time of the earliest settlers to today, showing the effects of economic, social and industrial conditions. Elimination or addition of various rooms and elements is traced and reasons given for changes. The chapter dealing with the "era of economic problems," 1918-1928, points out the effects of the automobile and radio, efficiency in utilization of space and the use of ready-cut materials.

As history the book is complete enough for reference use. Little attempt, however, is made to indicate what should be done in housing today other than the statement that changes are essential and that house space might be allotted to fit family sizes. The author suggests the use of houses by rotation—"first, a small house for newly-weds; second, the family with children; lastly, the one for the family whose children have gone from the roof-tree, which will be another small house, having an ample living or conference room where periodic home comings may be enjoyed."

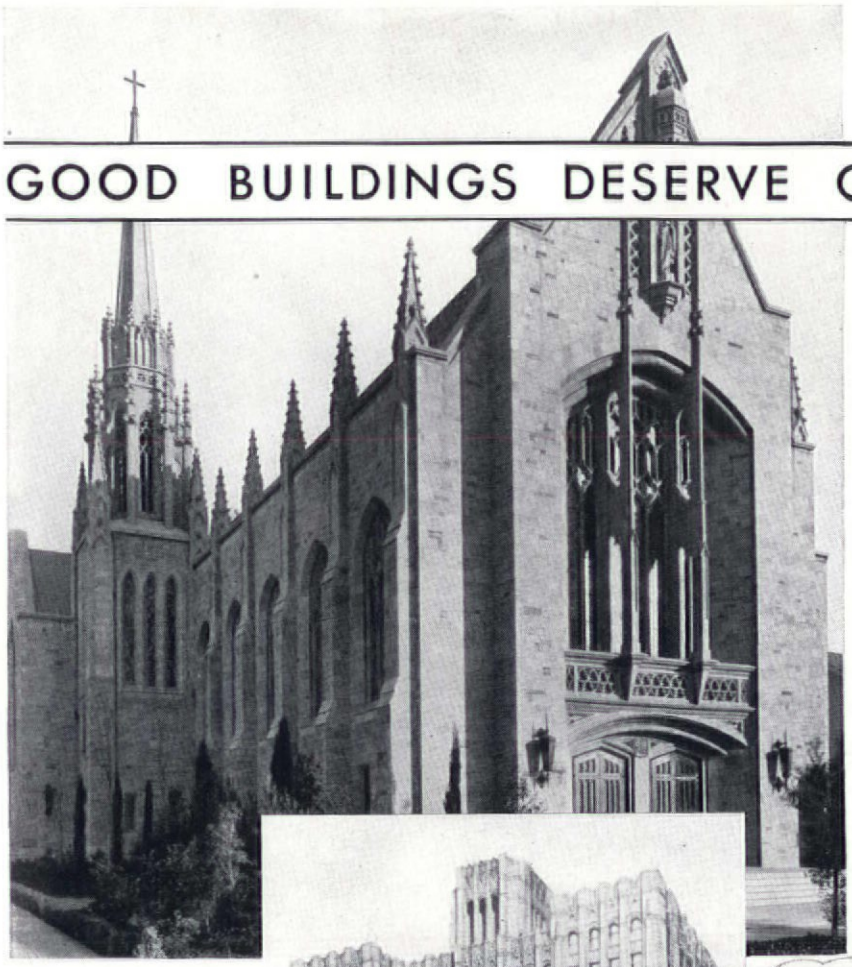
THE FUNDAMENTALS OF GOOD BANK BUILDING. Alfred Hopkins. *The Bankers Publishing Co.*, N. Y., 1930; $7.50.

The author is an architect specializing in banks and the book is illustrated largely with drawings and photographs from his own practice. While one gains the impression that the author-architect is telling how he would do it if he got the job, there is, nevertheless, helpful information on types of plans, vaults, the work-rooms, lighting, ventilation, floors, furnishing and similar items.

(Continued on page 98)

GOOD BUILDINGS DESERVE GOOD HARDWARE

CORBIN



ST. BRENDANS' CHURCH
Architect: E. G. Martin
Contractors: Mutter Bros.
Hardware: Corbin

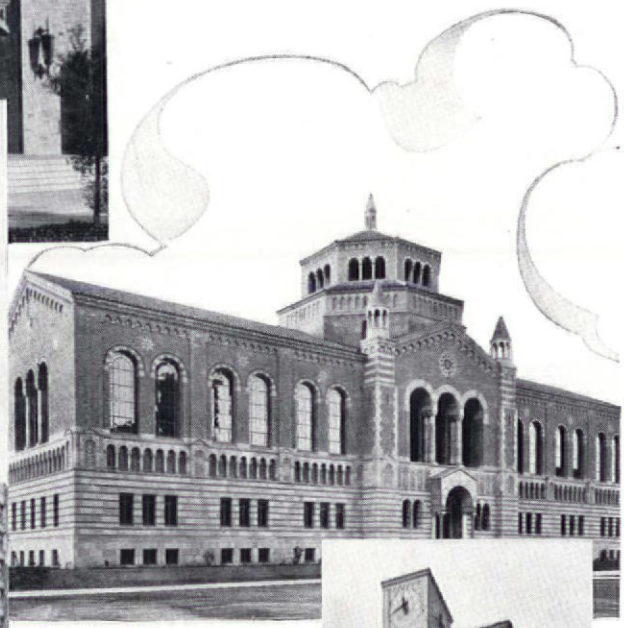
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SUN REALTY BUILDING
Architect: Claud Beelman
Contractors: Herbert M. Baruch Corporation
Hardware: Corbin

•

UNIVERSITY OF CALIFORNIA LIBRARY
Architect: Geo. W. Kelham
Contractor: J. C. Bannister
Hardware: Corbin





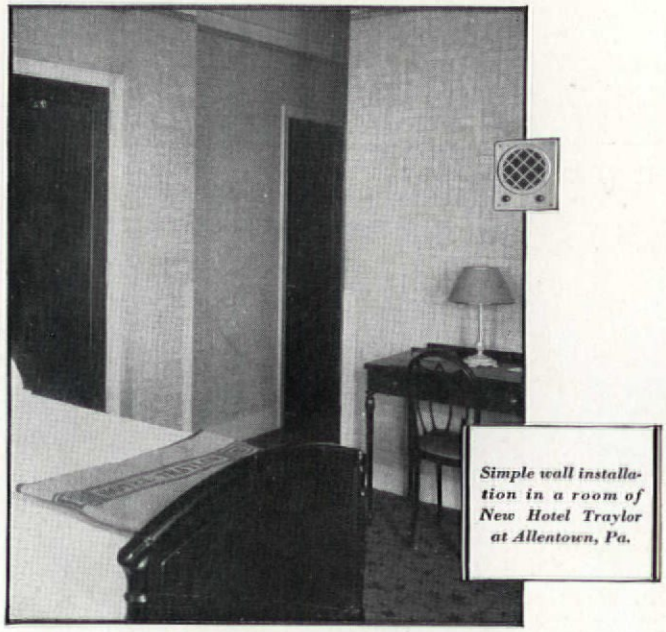
OVIATT BUILDING
Architects: Walker & Eisen
Contractors: P. J. Walker Co.
Hardware: Corbin



THIS distinguished new group of Los Angeles buildings indicates what architects and contractors in this territory think of Corbin hardware

P. & F. CORBIN SINCE 1849 New Britain, Connecticut, U. S. A.
The American Hardware Corporation, Successor

New York Chicago Philadelphia



Simple wall installation in a room of New Hotel Traylor at Allentown, Pa.

GUESTS

come again to hotels with

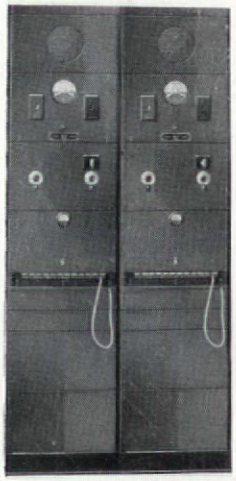
RCA
CENTRALIZED RADIO

TO be truly modern, a hotel must offer its guests radio entertainment! That's why the new Hotel Traylor installed RCA equipment!

To afford the modern hotel the finest in centralized radio equipment at low cost, RCA offers a centralized receiving system which distributes as many as four different broadcast programs to as many as 5,000 rooms.

By touching a wall switch, the guest can get whichever program he prefers.

RCA Centralized Radio is simple, economical, prevents future wiring costs, and avoids unsightly individual aerials and lead-in connections.



RCA engineers design apparatus to fit the job—the job is never forced to fit the apparatus.

Let us prepare Estimates

Descriptive pamphlets of this system and photographs of typical installations are available to architects and hotel executives.

Without any obligation, we shall gladly prepare plans and estimates for installations of any size.

FOR APARTMENTS

Where the use of individual sets in the rooms, plugged into wall outlets, is desired, there is a separate RCA Centralized System especially designed for the independent use of as many as 80 sets of different makes, operated from a single antenna. Additional groups may be operated from other antenna, if desired. The superior reception assured by this system makes for greater tenant satisfaction and higher rentability.

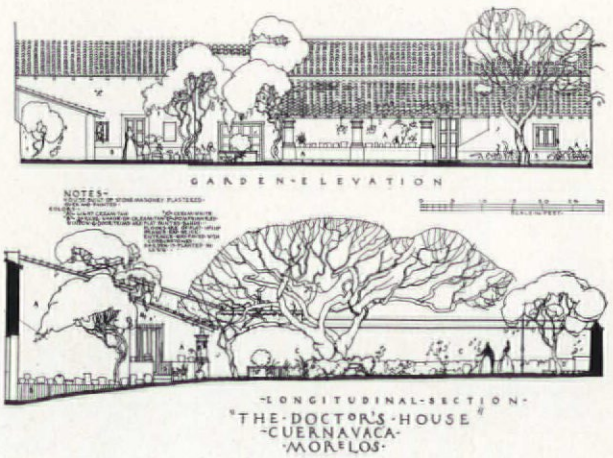
Engineering Products Division, Section A

RCA VICTOR COMPANY, INC.

261 Fifth Avenue New York City

Representatives in Principal Cities

Visit the permanent RCA Centralized Radio Exhibit at the RCA-Victor Salon, Boardwalk, Atlantic City



MEXICAN HOUSES. Richard Garrison and George Rustay. *Architectural Book Publishing Co.*, N. Y., 1930; $15.00.

The photographs and measured drawings in this book were made by two young architects on a ten-months' visit to Mexico in 1928 and 1929. To users of plates the volume will be invaluable, and also to students in rendering. It is not the fruit of research, as the foreword implies, but the by-product of a delightful sojourn in our neighboring land, where leisure, craftsmanship, and a love of color has been written into their humblest dwellings. Some will question the desirability of attempting to take over, in our rush communities, the forms appropriate to Mexico.

FUNDAMENTALS OF ARCHITECTURAL DESIGN. W. W. Turner. *McGraw-Hill Book Co.*, N. Y., 1930; $6.00.

This book is a brave attempt to do the impossible. It covers those mechanical processes commonly taught to the young student of architecture, such as shades and shadows, perspective, drawings of the orders and rendering. It does not set forth the fundamentals of architectural design. Architectural design is the creation of schemes for habitations, working space, living areas, with consideration of man's needs for existence and activity. The book in no way can aid the architect in making better buildings.

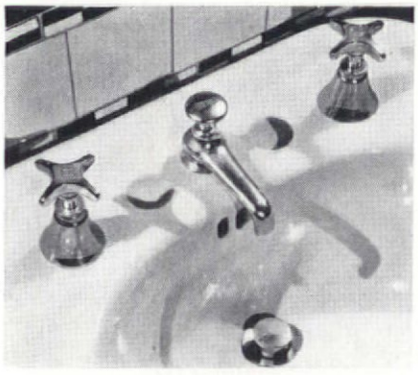
NOTES IN BRIEF
AND ARCHITECTS' ANNOUNCEMENTS

M. LOUIS KROMAN, architect, announces the opening of an office at 180 N. Michigan Avenue, Chicago.

THOMAS P. BARBER and PAUL KINGSBURY, architects, have formed a partnership with offices at 628–9 Union Insurance Building, Los Angeles.

THE OFFICE of Joseph Evans Sperry announces with regret the death of the senior member of the firm, Joseph Evans Sperry, on August 6. The practice of architecture will be continued under the same firm name by the surviving partners, Herbert G. Crisp and James R. Edmunds, Jr.

(Continued on page 100)





three complete lines

OF KOHLER BRASS... DESIGNED TO SPEED THE SALE!

THE modern builder has to plan bathrooms carefully. These days, home and apartment hunters look at that room first. They assume that the plumbing system is efficient. But they want to see for themselves that color, design, and style of fixtures are right—that fittings, down to the last detail, are in complete harmony. Mentally, at least, they may decide to buy or rent right then and there.

When you specify Kohler brass to the builder, you specify fittings built for positive, silent action—divided into three complete groups that meet every taste and pocketbook. The Octachrome series, with clear-cut octagonal lines, includes the latest and most exclusive Kohler designs. Dynamic patterns have rounded, flowing surfaces, and come at a lower price level. The Continental designs have handles and escutcheons of vitreous china, and are still more moderately priced.

Here, every ounce of brass has a purpose

Kohler brass fittings are superbly constructed. The metal is real red brass, with a high virgin copper content. The heavy plated chromium finish, easily cleaned, looks like fine silver; nickel and gold finishes are equally beautiful. . . . No waste material takes up space on Kohler brass-ware—no little gee-gaws that add nothing to the efficiency and ease of operation. Free passageways, ample clearances, and water-tight joints, together with advanced design, make Kohler fittings unusual for their combined utility and style.

Kohler fittings ordered with Kohler fixtures mean that the fittings will fit. Kohler Company. *Founded* 1873. Kohler, Wis. —*Shipping Point*, Sheboygan, Wis.—*Branches in principal cities*. . . . Look for the Kohler mark on each fixture and fitting.

1. *The* K-8025 GERARD *lavatory fitting illustrates the forceful beauty of the Dynamic design.*

•

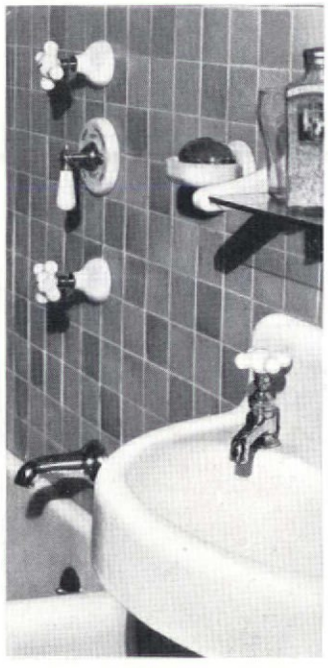
2. *An interesting note is added to this bathroom by the graceful lavatory fittings and the distinctive bath and shower combination with engraved plate, both in Octachrome design.*

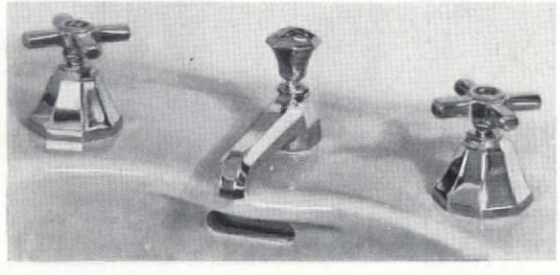
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3. *The* K-8090 BERTRAND *lavatory faucet and* K-7910 *bath and shower fitting in Continental design.*

•

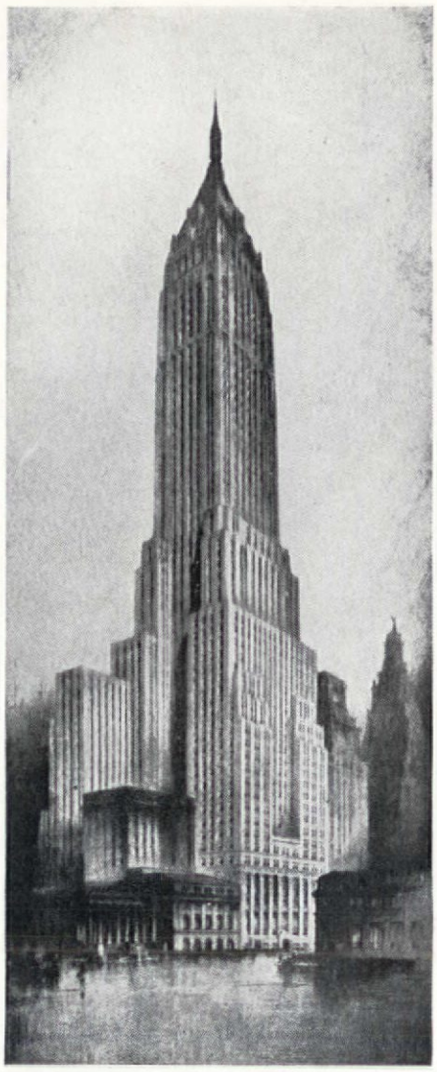
4. *The* K-7424 EMERY *lavatory fitting in Octachrome design has a distinctive grace and beauty.*





KOHLER OF KOHLER

PLUMBING FIXTURES



Bank
of
Manhattan
■
New York

Another notable structure for which Robert W. Hunt Company were retained for the inspection of all structural steel.

H. C. Severance was the architect, Purdy & Henderson the steel engineers and Starrett Bros., Inc. the general contractors

See Sweet's A4

STEEL AT SHOP AND FIELD
CEMENT—CONCRETE
CONCRETE SUPERINTENDENCE

ROBERT W. HUNT COMPANY
Engineers

Inspection . . . . Tests
Insurance Exchange

CHICAGO

All Large Cities

NOTES IN BRIEF—Continued

THE NAME of the firm of Wolf, Sexton, Harper and Trueax, Inc., engineers and architects, has been changed to Wolf, Anderson, Harper and Trueax, Inc. Offices are located in the Tribune Tower, Chicago.

JAMES L. GATLING, architect, has opened an office at 811 Bankers Bond Building, Birmingham, Alabama. He requests manufacturers' catalogs and samples.

WATER TANK DESIGN COMPETITION

The Chicago Bridge and Iron Works announces a competition for a typical tank and tower design which will express "pleasing esthetic qualities." The following prizes are offered for the eight "most interesting" solutions: first prize, $2,000; second, $1,000; third, $500; and five honorable mention prizes of $100 each.

The competition has been approved by the Chicago chapter of the A. I. A. and is open to all architects, engineers and draftsmen who shall have made application by mail to the professional adviser on or before December 1. Albert M. Saxe, architect, 430 No. Michigan Avenue, Chicago, has been appointed as professional adviser.

In order that the greatest possible latitude may be given to the competitors and the maximum of real public service attained, the example chosen as a basis for the designs is what may be called a typical elevated steel tank on a supporting steel structure, to serve a small city or suburban community. The physical requirements shall be as follows (mandatory):

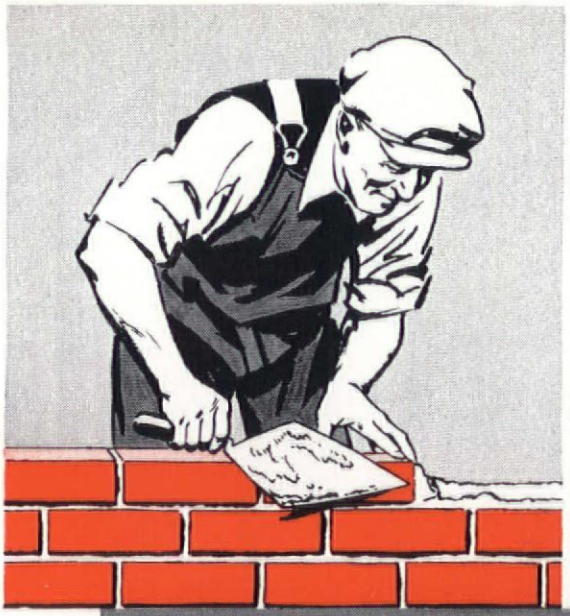
1. The tank shall contain 200,000 gallons, or approximately 26,700 cu. ft.
2. The top of the tank shall be not more than 110 ft. above the ground level; and the low water line, or bottom of the tank shall be not less than 85 ft. above the ground level.
3. The water connection or standpipe from the tank to the ground shall be at least 5 ft. in diameter, which is the size necessary to prevent freezing.
4. All portions of the entire tank and structure must be built entirely of structural steel, but in so doing it must not contain metal work nor sheet metal, the nature of which may be perishable or short lived, either as a result of its design or the frailty of its mass.

In judging the relative merit of the designs, the jury will be governed by the apparent permanency and commercial practicability of the structure, as well as its esthetic qualities.

MACHINE AGE EXPOSITION

Representations of early and modern building construction, together with affiliated activities, will be portrayed in a special machine exhibit which the Museums of the Peaceful Arts, New York City's museum of science and industry, will hold in its new quarters in the News Building, 220 East 42nd Street, from September 12 to November 15, open to the public without charge.

(Continued on page 102)



SAVE ON YOUR MASONRY

BETTER masonry at less cost has made Brixment the world's largest-selling mason's cement:

[1] It costs less than the portland and lime required to make an equal amount of mortar.

[2] No soaking, no slaking. Ready to mix by hand or machine.

[3] Saves bricklayer's time because it's easier to spread and sticks to the headjoint; its unusual plasticity and convenient set help him in striking joints.

[4] Reduces labor in cleaning down the wall because it doesn't slop down over the face of the brick. Louisville Cement Co., Incorporated, Louisville, Kentucky.

CEMENT MANUFACTURERS SINCE 1830

BRIXMENT

for MASONRY and STUCCO





NOTES IN BRIEF—Continued

The exhibit will outline the influences making for machine development: the principal products and services developed since the beginning of the nineteenth century, and representations of power, metals and machine tools.

Exhibits will include a six-foot model of the Empire State Building and a photographic display showing the evolution of the steel skyscraper, arranged through the courtesy of Colonel W. A. Starrett. In the "Industry in Art" section of the exhibit there will be photographic studies of the new Hudson River bridge by Frederick L. Ackerman, architect. Progression studies of a number of recent buildings will also be displayed. Other phases of the construction industry will be shown in representations of bridges, subway and tunnel building, road building, and the like.

The exhibit will also include communications, textiles, transportation, agriculture, metals, power machine tools. Actual machines, many in operation, models, illustrations, statistical graphs, motion pictures and other display media will be used in the presentation of the exhibit.

CITY PLANNING

American cities have begun to emerge from their "pioneering era of ugliness," according to a report by the committee on city and regional planning of the American Institute of Architects, made public by Robert D. Kohn, president of the institute.

Major traffic street plans calling for the expenditure of hundreds of millions of dollars have been completed in one hundred forty-four cities and begun in sixty-four others. The report points to the New York State law forbidding building where the city council has adopted the street plan and to Schenectady, N. Y., which has adopted its complete plan, as examples of intelligent progress. St. Louis continues to develop the most consistent city planning work in the country under Harland Bartholomew, city planner, and E. J. Rossell, architect, the report says.

Smaller cities, even small towns need street plans as much as metropolitan areas because of increased use of the automobile, demands for airports, parks and enlarged business centers.

Because of the demand for wider streets, great avenues of trees are being sacrificed and cities denuded of shade, uncovering graceless architecture. California has a law requiring trees to be replanted as the streets are widened.

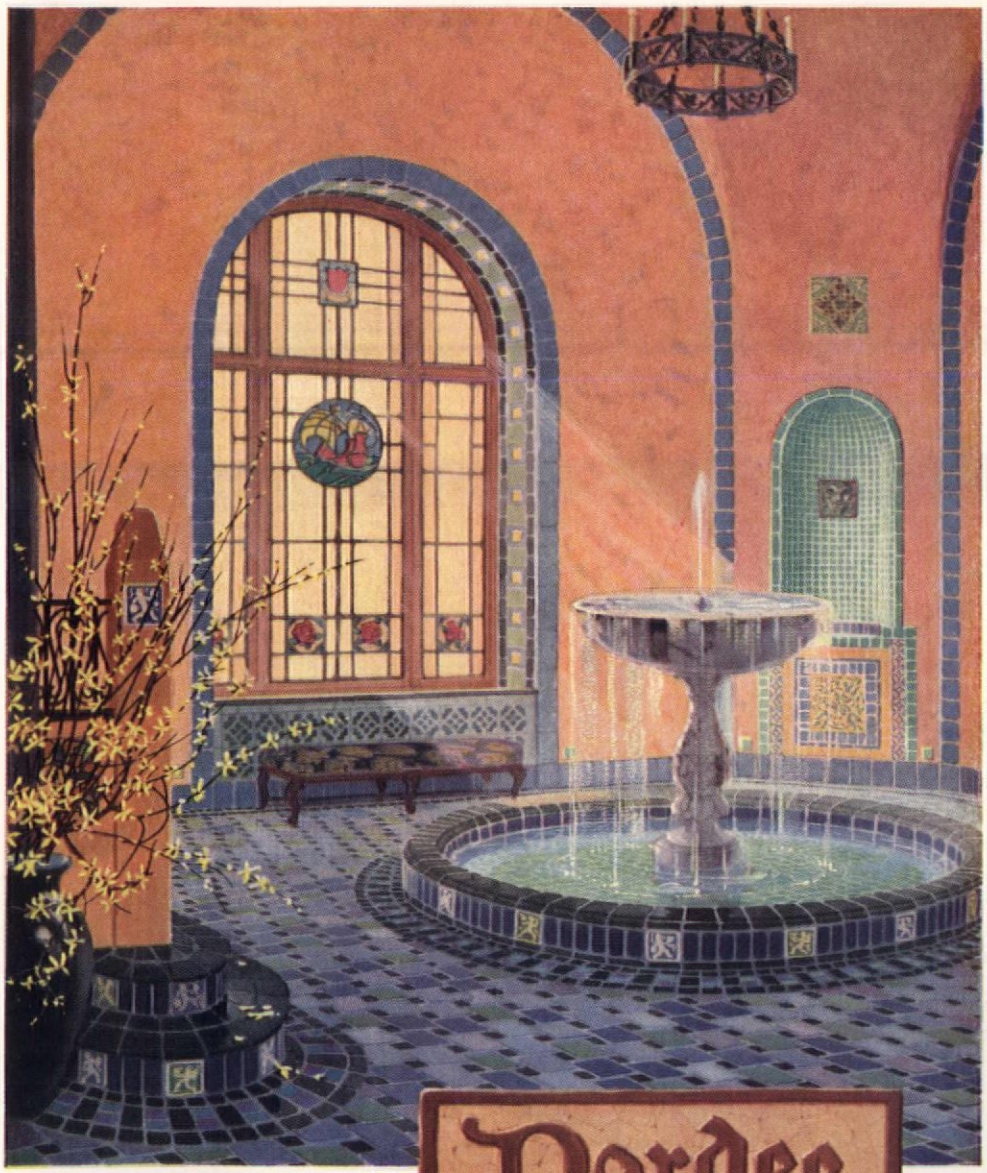
"More cities are adopting the 10-25-40 standard, that is, ten acres for each elementary school, playground and park, about a mile apart in metropolitan areas; twenty-five acres for junior high school and playfields about every two miles and forty acres for senior high schools and junior colleges three miles apart," the report continues.

"Regional planning activity in the United States has materially increased, particularly in and about Chicago, Los Angeles, Philadelphia and Washington. Many new county planning commissions have been established."

Trading Dollars

NO ONE ever made any money doing this unless the other fellow was "short changed." This "short changing" process seems to be responsible for a good deal of unsatisfactory work. It is one method of getting blood out of a stone.

The consistently "low man" hands in a figure which looks like an even exchange of currency. You feel that you are putting HIS profit in YOUR pocket . . . that is, until you look at the completed work. Then you feel sorry for yourself and wish to Heaven you had taken a figure more consistent with good workmanship. SPECIFY PARDEE TILES . . . and then insist on a PARDEE BONDED INSTALLATION.



Pardee Supplies
Whatever You Need in Tile

THIS COUPON WILL ACT AS A USEFUL MESSENGER

The C. PARDEE WORKS
101 Park Avenue, New York City

Kindly send me without cost or obligation:

☐ Portfolio in color.

☐ Color sketch of enclosed area showing how it will look if tiled in Pardee.*

*I enclose (check one) ☐ sketch of tile area (withdimensions) ☐ blueprint with area indicated.

Color scheme is.....

Name.....

Street.....

City.....

State.....

A. R. 9-30

MATAWAN **Pardee Tiles** CERAMICS



A typical Desco installation—showing the attractive effects which these high quality store fronts provide for display windows.

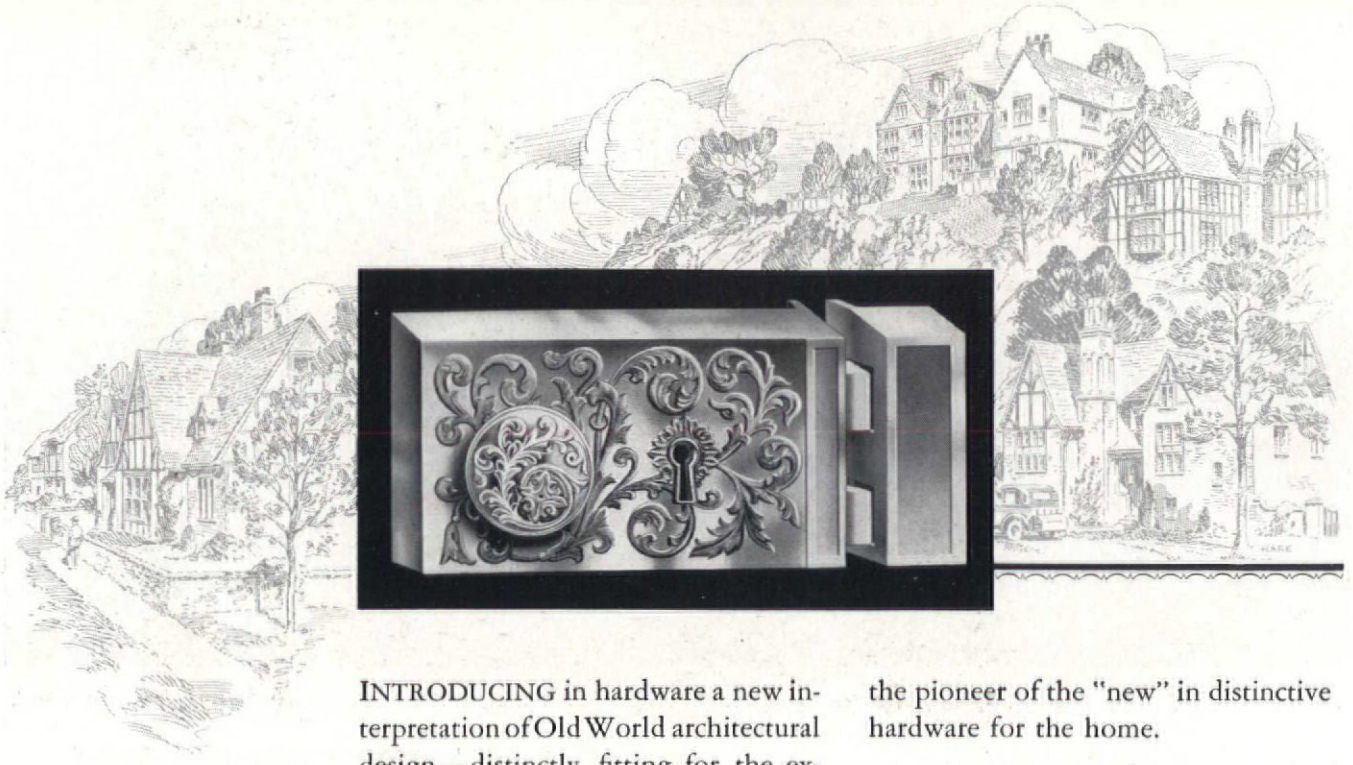
Where the Display Window is Important Specify—DESCO METAL STORE FRONTS

Modern merchandising demands attractive and constantly changed display windows. To frame these varied displays, Desco Store Fronts are unusually well suited. Handsome in appearance and made of fine, lasting materials, they harmonize with any building design as well as the window display. Then, too, they are sufficiently flexible to protect the glass against abnormal wind pressure. Made in a wide variety of metals, including solid copper (plain or embossed), solid bronze in all standard finishes and aluminum alloy, Desco Store Fronts should be included in the specifications for your next building.

For full architectural details see Sweet's catalog. Write us for complete working data and price list. Remember, too, wherever you are there is a distributor near you. We also carry a complete line of "Desco" construction material in our New York City warehouse.

DETROIT SHOW CASE CO.
1670 West Fort Street · Detroit, Michigan
New York City Office and Warehouse — 344-346 East 32nd Street
Pacific Coast Office — 450 Skinner Building, Seattle, Washington

Desco METAL REG. U.S. PAT. OFFICE **STORE FRONTS**



INTRODUCING in hardware a new interpretation of Old World architectural design — distinctly fitting for the exclusive suite, the restful foyer, the fine town house, country home or manor.

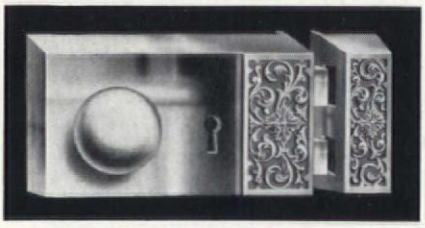
Classic Masterpieces in Hardware by **RUSSWIN**

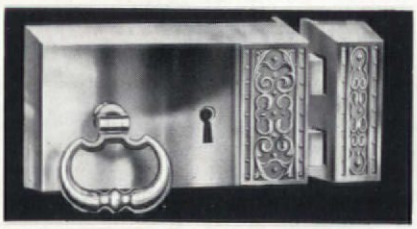
Massive in appearance with a rugged durability further enhanced by delicate arabesque traceries, RUSSWIN Rim-locks—like all RUSSWIN Hardware—are made of the finest metals, brass and bronze . . . every one of their component parts are hand-fitted by craftsmen, that their rare beauty and charm shall have a like perfection of workmanship.

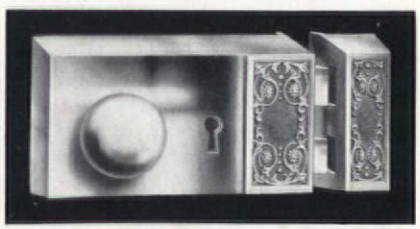
The four designs shown herewith are the latest development of RUSSWIN, which for almost a century has been the pioneer of the "new" in distinctive hardware for the home.

Inside and out, the quality of RUSSWIN Rim-locks is built to give a lifetime of lasting, trouble-free service and satisfaction . . . hardware you will be proud to live with and which will be a fitting expression of good taste for all years to come. Russell & Erwin Manufacturing Company (The American Hardware Corporation, Successor) New Britain, Connecticut — New York, Chicago, London.

R&E SINCE 1839
RUSSWIN
RUSSELL & ERWIN
DISTINCTIVE HARDWARE
Hardware that lasts — Base Metals of Bronze or Brass







For the Architect's convenience RUSSWIN Hardware is illustrated and described in Sweet's catalogue, pages C-3137—C-3216.



Dining Hall, Georgia State Industrial College, Savannah, Ga. Cletus W. Bergen, Architect. Union Metal Columns and Pilasters (Design 237) used.

STEEL COLUMNS
Insure Permanence

ARCHITECTURAL columns of pressed steel bring to building entrances that permanence which is so essential to any artistic creation. When Union Metal Columns are used, the elements may do their worst. Wind and snow, cold and sun have no effect on the heavy galvanized copper-bearing steel from which the columns are made.

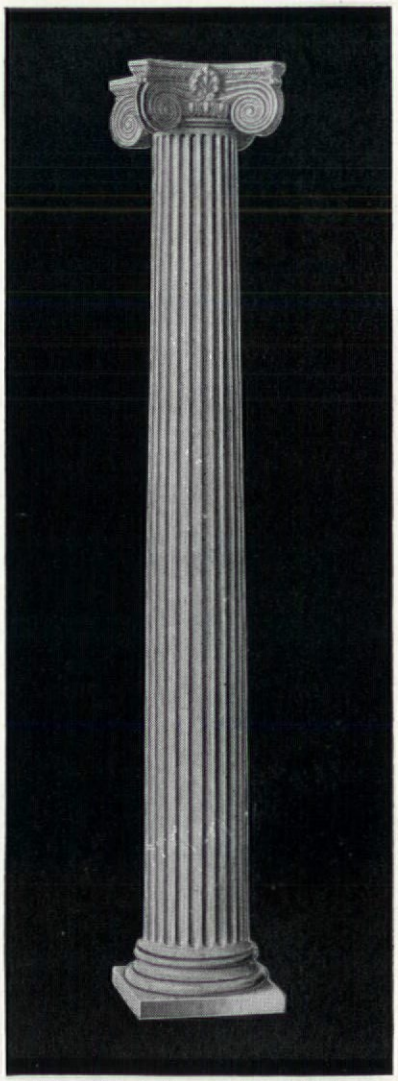
After a lifetime of service, these columns continue to impart a touch of quality to the building they adorn. And yet Union Metal Columns cost little more than less durable types. And upkeep costs are limited to a coat of paint at long intervals.

You will be interested in learning the complete story of the ten classical columns which comprise the Union Metal line. Write for information today.

THE UNION METAL MANUFACTURING CO.
GENERAL OFFICES AND FACTORY ◆ CANTON, OHIO
SALES OFFICES: New York, Chicago, Cleveland, Boston
Los Angeles, San Francisco, Seattle, Dallas, Atlanta

UNION METAL COLUMNS

"THEY LAST A LIFETIME"



Union Metal Pressed Steel Column Design No. 237. (Composition capital).



"One false move..." he snarled

HIDE A FACE? Yes, on occasion. But don't hide fine architectural design with the spotted bandanna of inappropriate and variegated building stone. Architects who design in the modern style with vast wall expanses and sweeping vertical lines, are not using stone which is uneven in tint and tone—they specify one whose warm, creamy lightness is absolutely uniform. The greatest recommendation of Victor Select and Standard Buff Limestone is its uniform, creamy tone—there are no checkerboard variations in tint and color to camouflage structural lines and offsets, kill carving detail and reduce the effectiveness of modern architectural design. Furthermore, the supply of Victor Buff Limestone is virtually unlimited—an important point where the building of today will tomorrow be surrounded by others that must necessarily be in harmony with it.

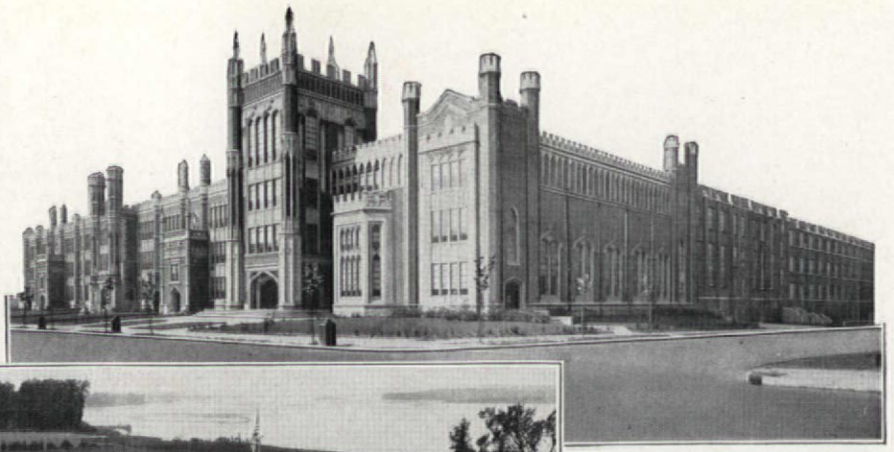
Represented in the new 4-volume
Sweet's for 1930, Vol. A, page 453

VICTOR OOLITIC STONE CO.

Bloomington, Indiana

Half Way Around the World

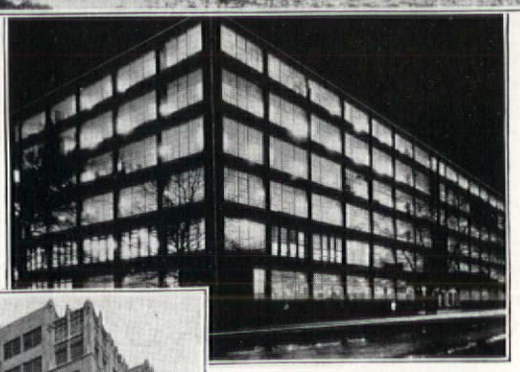
. . NEW YORK to SHANGHAI



Bayonne Junior Vocational High School, Bayonne, N. J. Donald G. Anderson, Architect, Bayonne, N. J. Egan & Montague, Contractors, New York City.



St. Louis Water Works, St. Louis, Mo. Study & Farr, Architects, St. Louis, Mo. Dunham Construction Co., Contractors, St. Louis.



A. & P. Quaker Maid Plant, Terre Haute, W. B. Van Inwegan, Architect, New York. Glenn W. North Const. Co., Terre Haute, Ind.

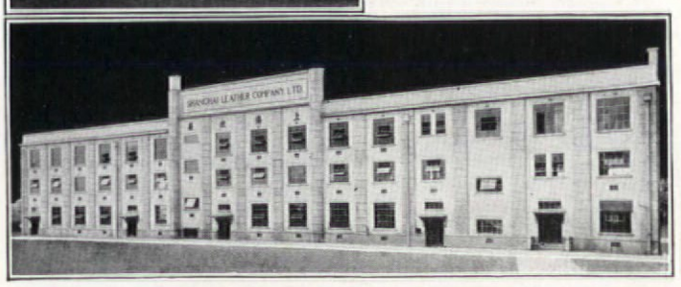
Merchants' Exchange Building, Los Angeles. W. Douglas Lee, Arch. & Contr., Los Angeles.



Bayley Steel Products include the following

•

Pivoted Windows
Pivoted Windows Screened
Projected Windows Commercial
Projected Windows Architectural
Casement Windows
Continuous Windows
Detention Windows
Prison Windows
Airport Doors
Tubular Doors



Shanghai Leather Co., Ltd., Shanghai, China.
R. A. Curry, Architect, Shanghai.
Anderson Meyer & Co., Contractors, Shanghai.

IT is indeed significant that the acceptance of Bayley Steel Windows is not confined to any one section or any one country but reaches far beyond the cities and the borders of the U. S. A. — even way over into the Orient.

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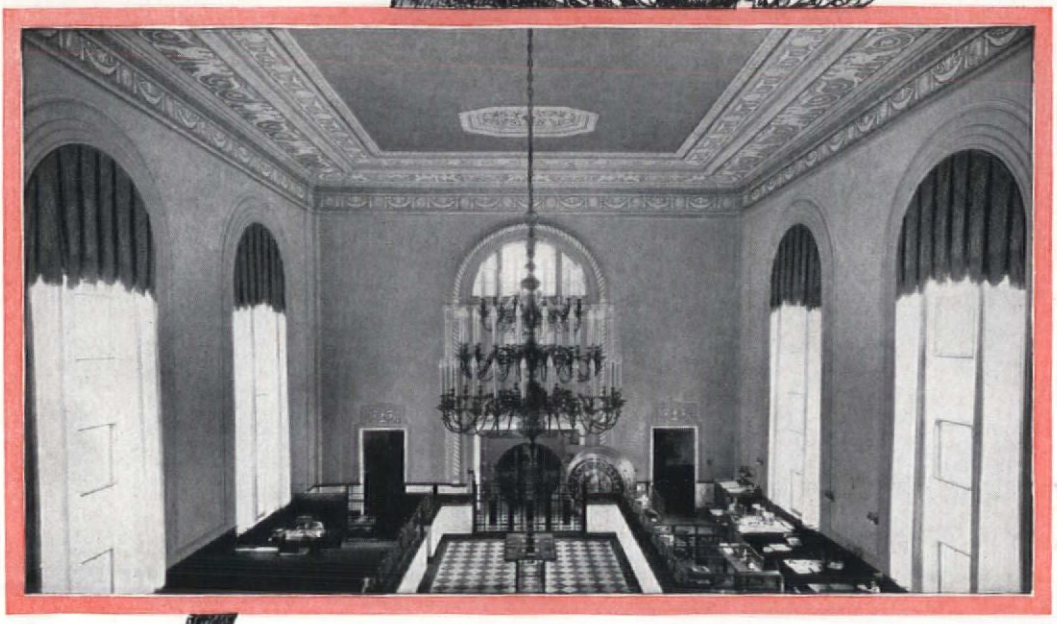
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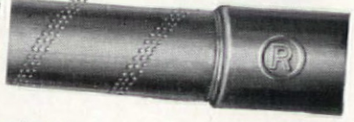
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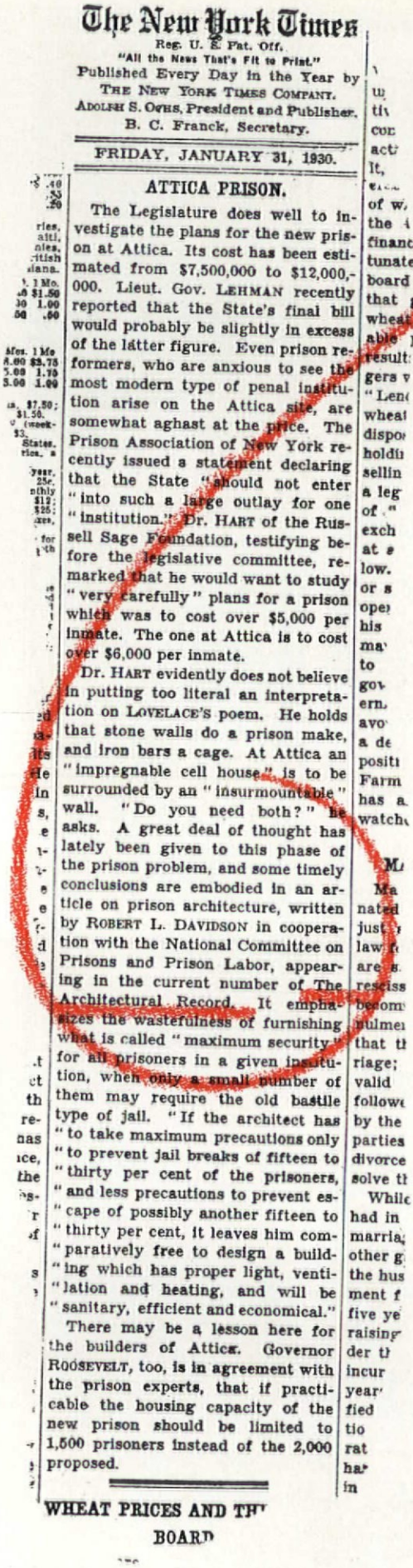


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FRIDAY, JANUARY 31, 1930.

ATTICA PRISON.

The Legislature does well to investigate the plans for the new prison at Attica. Its cost has been estimated from $7,500,000 to $12,000,000. Lieut. Gov. LEHMAN recently reported that the State's final bill would probably be slightly in excess of the latter figure. Even prison reformers, who are anxious to see the most modern type of penal institution arise on the Attica site, are somewhat aghast at the price. The Prison Association of New York recently issued a statement declaring that the State "should not enter "into such a large outlay for one "institution." Dr. HART of the Russell Sage Foundation, testifying before the legislative committee, remarked that he would want to study "very carefully" plans for a prison which was to cost over $5,000 per inmate. The one at Attica is to cost over $6,000 per inmate.

Dr. HART evidently does not believe in putting too literal an interpretation on LOVELACE'S poem. He holds that stone walls do a prison make, and iron bars a cage. At Attica an "impregnable cell house" is to be surrounded by an "insurmountable" wall. "Do you need both?" he asks. A great deal of thought has lately been given to this phase of the prison problem, and some timely conclusions are embodied in an article on prison architecture, written by ROBERT L. DAVIDSON in cooperation with the National Committee on Prisons and Prison Labor, appearing in the current number of The Architectural Record. It emphasizes the wastefulness of furnishing what is called "maximum security" for all prisoners in a given institution, when only a small number of them may require the old bastile type of jail. "If the architect has "to take maximum precautions only "to prevent jail breaks of fifteen to "thirty per cent of the prisoners, "and less precautions to prevent es"cape of possibly another fifteen to "thirty per cent, it leaves him com"paratively free to design a build"ing which has proper light, venti"lation and heating, and will be "sanitary, efficient and economical."

There may be a lesson here for the builders of Attica. Governor ROOSEVELT, too, is in agreement with the prison experts, that if practicable the housing capacity of the new prison should be limited to 1,500 prisoners instead of the 2,000 proposed.

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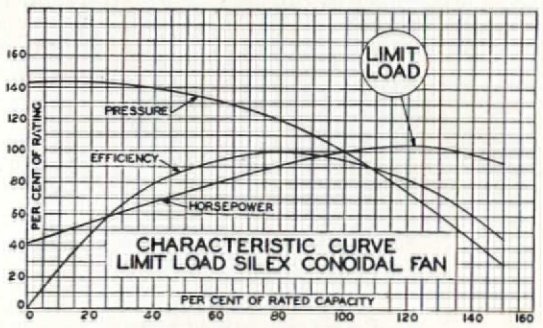
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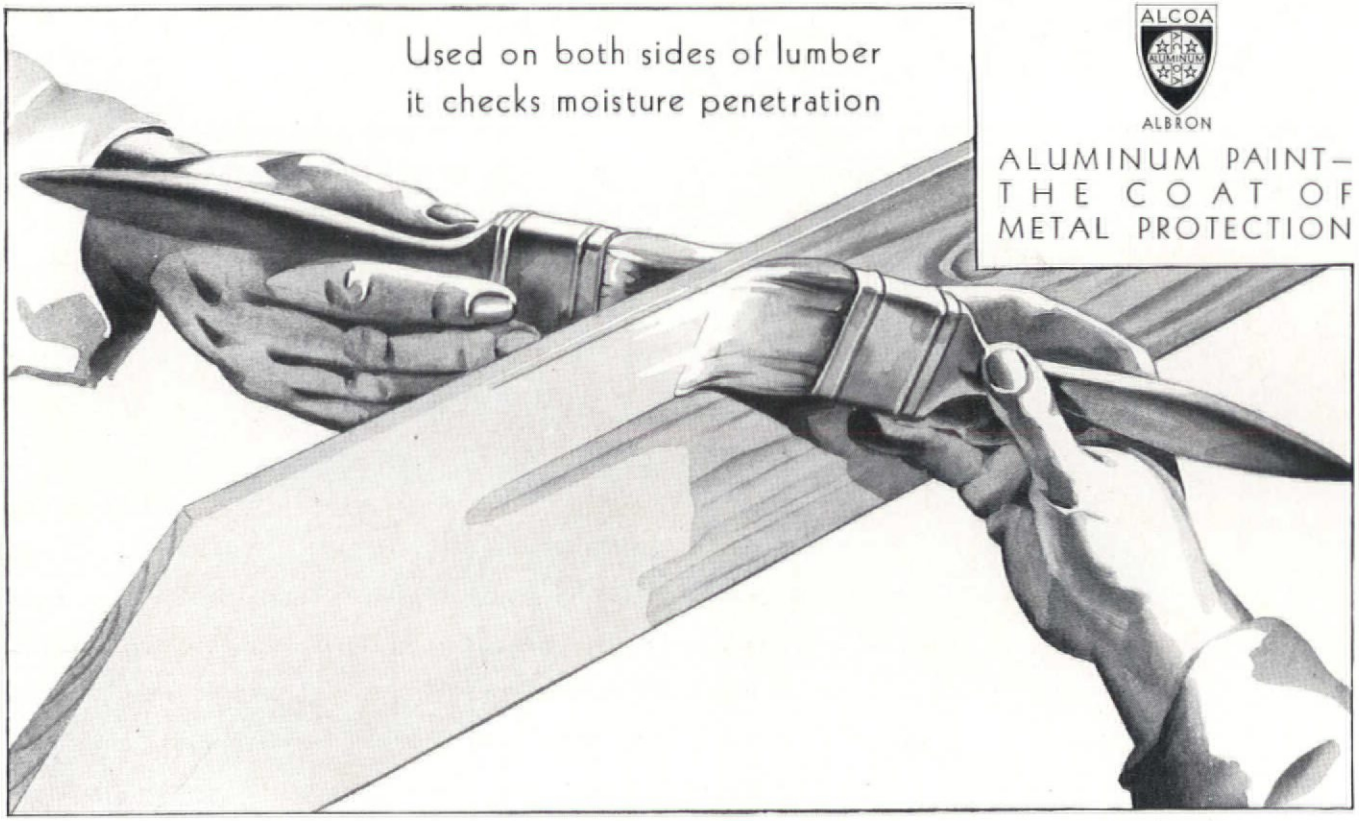
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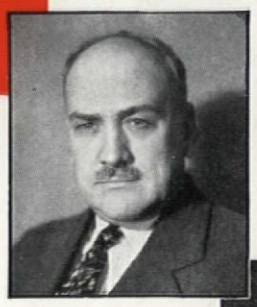
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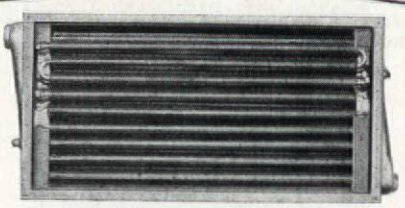
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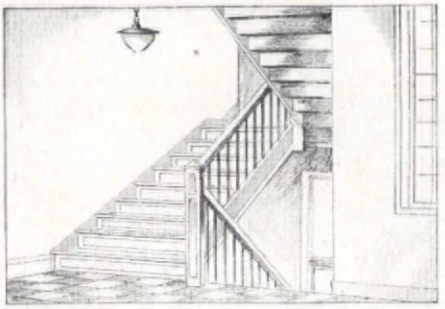
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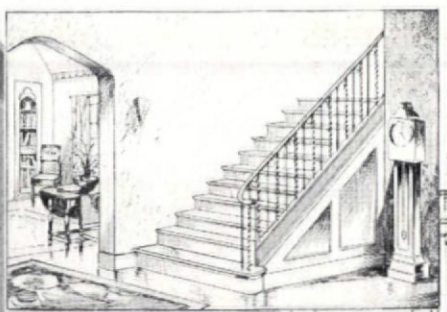
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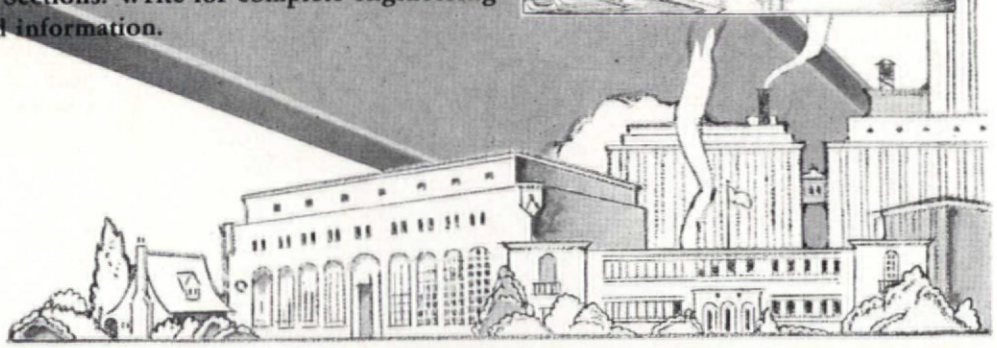
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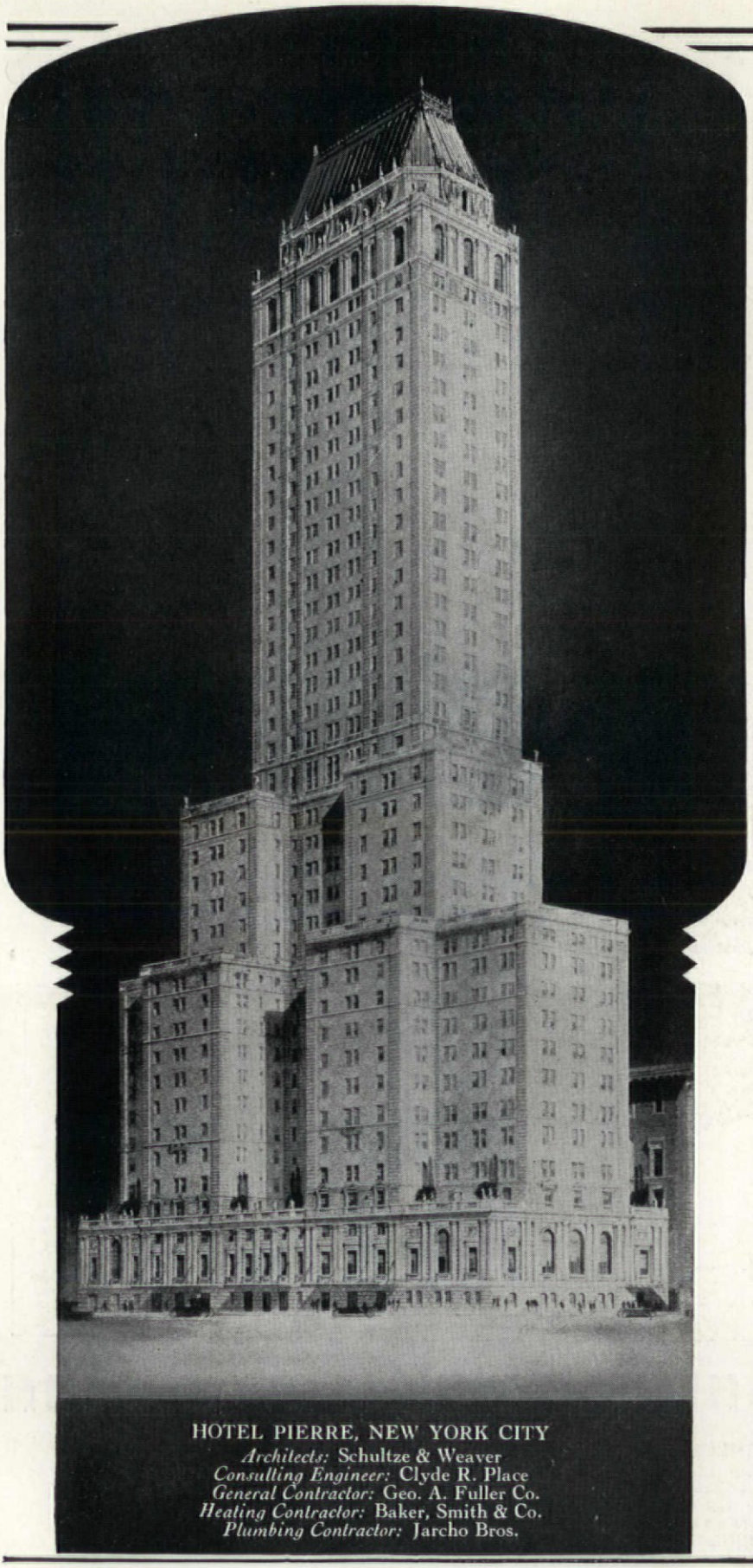
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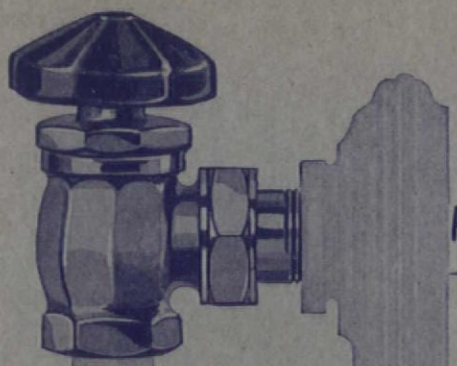
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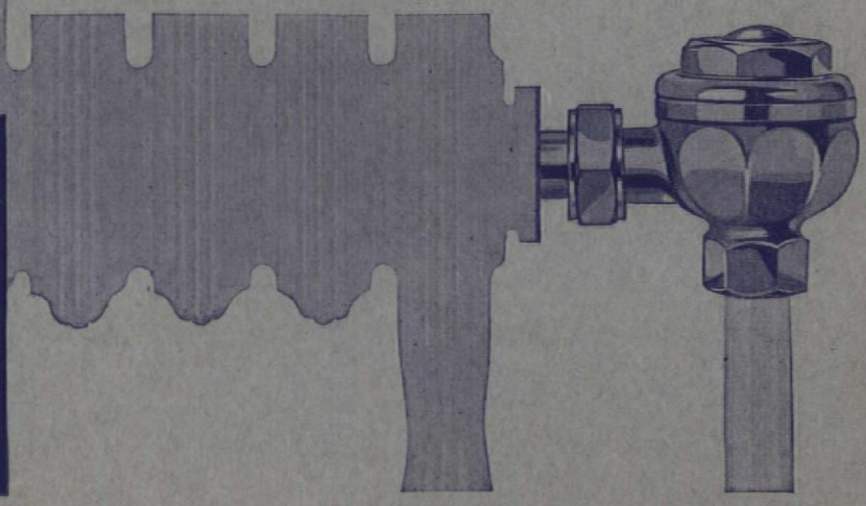
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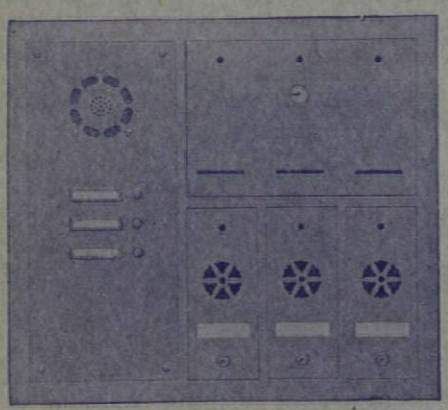
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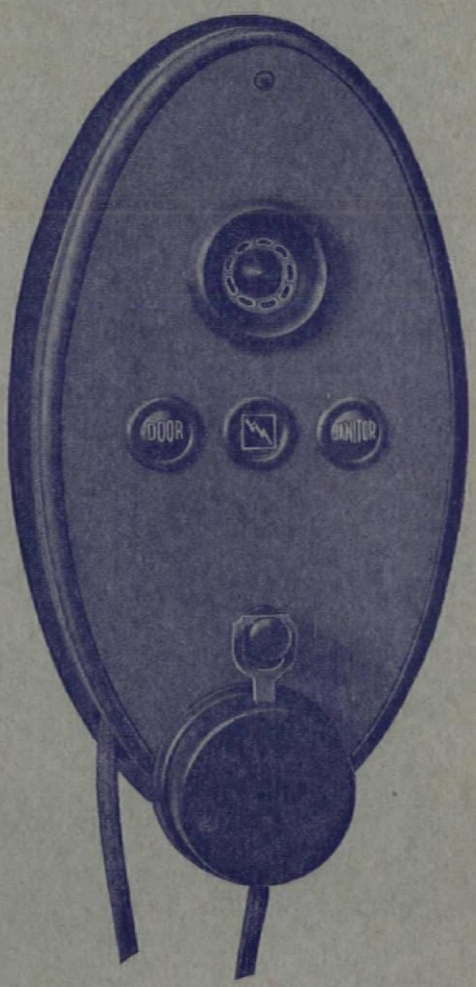
Clients appreciate the thoughtfulness of architects who specify CONNECTICUT CONNECTAPHONE.



Cordless Vestibule Phone and mail box combination. An original Connecticut development—a vestibule partner for the CONNECTAPHONE.

Your files should include literature on this equipment. Write for the latest.

Simply mention CONNECTAPHONE and we will send complete information.



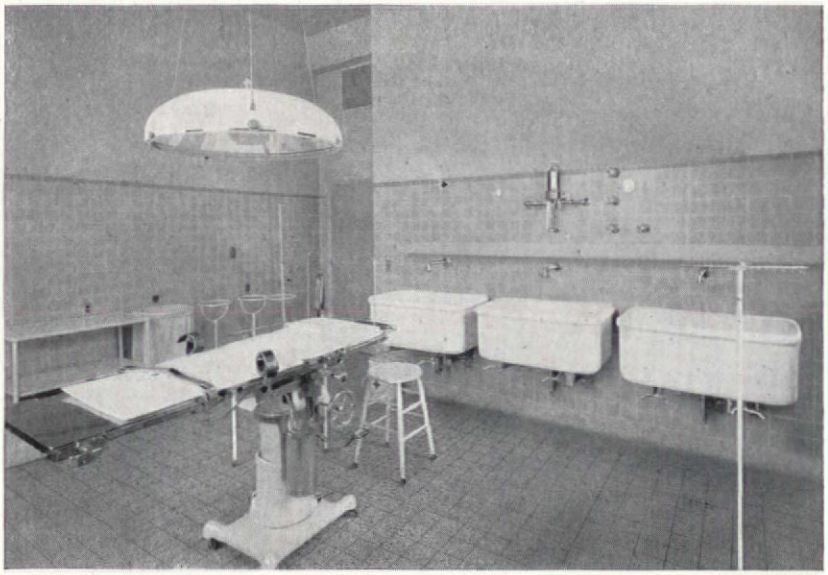
CONNECTAPHONE—a product of experience. Harmonizes with the finish of modern homes, apartments or offices.

CONNECTICUT TELEPHONE & ELECTRIC CORPORATION

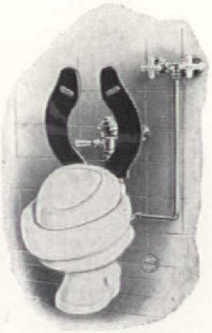
54 Britannia Street — Meriden, Conn.



A Te-pe-co Hospital Infant Bath with Drain Shelf. An indispensable fixture in maternity wards.

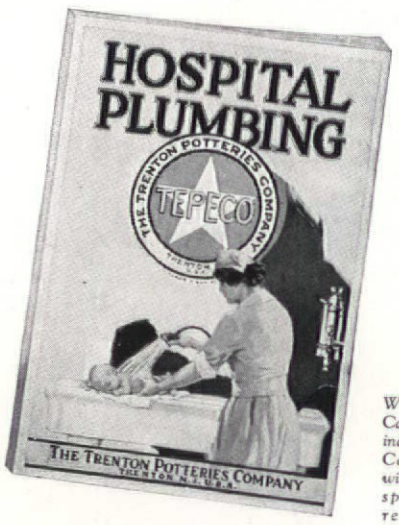


Installation of Te-pe-co in the new Northwestern Hospital Operating Room, Minneapolis, Minnesota



Besides its normal functions, the construction of this Te-pe-co Hospital Closet includes a Bed Pan Jet, operated by a separate mechanism.

TE-PE-CO All-Clay Plumbing Fixtures meet the exacting requirements of Hospital Plumbing. The Te-pe-co Line was designed only after exhaustive investigation and consultations with the leading surgeons and experts.



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Fellow of American Institute of Architects—Member of American Hospital Association

The most complete, up-to-date and valuable book on Hospital Planning and Equipment. The author has himself planned more than 150 hospitals and institutions.

Originally published in 1918, this book promptly became the recognized authority on the subject of Hospital Planning. The revised edition was printed in 1921 and this second edition has been entirely exhausted. The third edition, published in November, 1928, represents an entire rewriting of all subjects and an increase from 224 pages in the first edition and 380 in the second edition to 550 in this new edition, with 660 illustrations of plans, details and photographs.

"The American Hospital of the Twentieth Century" presents in a concrete form a vast fund of correlated facts, dealing with a number of Hospitals of international fame —many of them of very recent construction or completion.

Probably no abler exponent or keener observer than Mr. Edward F. Stevens, of Boston, could be selected to write so valuable and indeed indispensable a book. Known throughout both Europe and America as a leading architectural authority on Hospital construction and equipment, whose specialized genius is represented by some of the most perfected and noblest edifices extant among modern Hospitals, he has approached his subject from a most practical standpoint, selecting with discrimination and discussing in full detail.

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550 pages—with 660 illustrations and floor plans

The Architectural Record,
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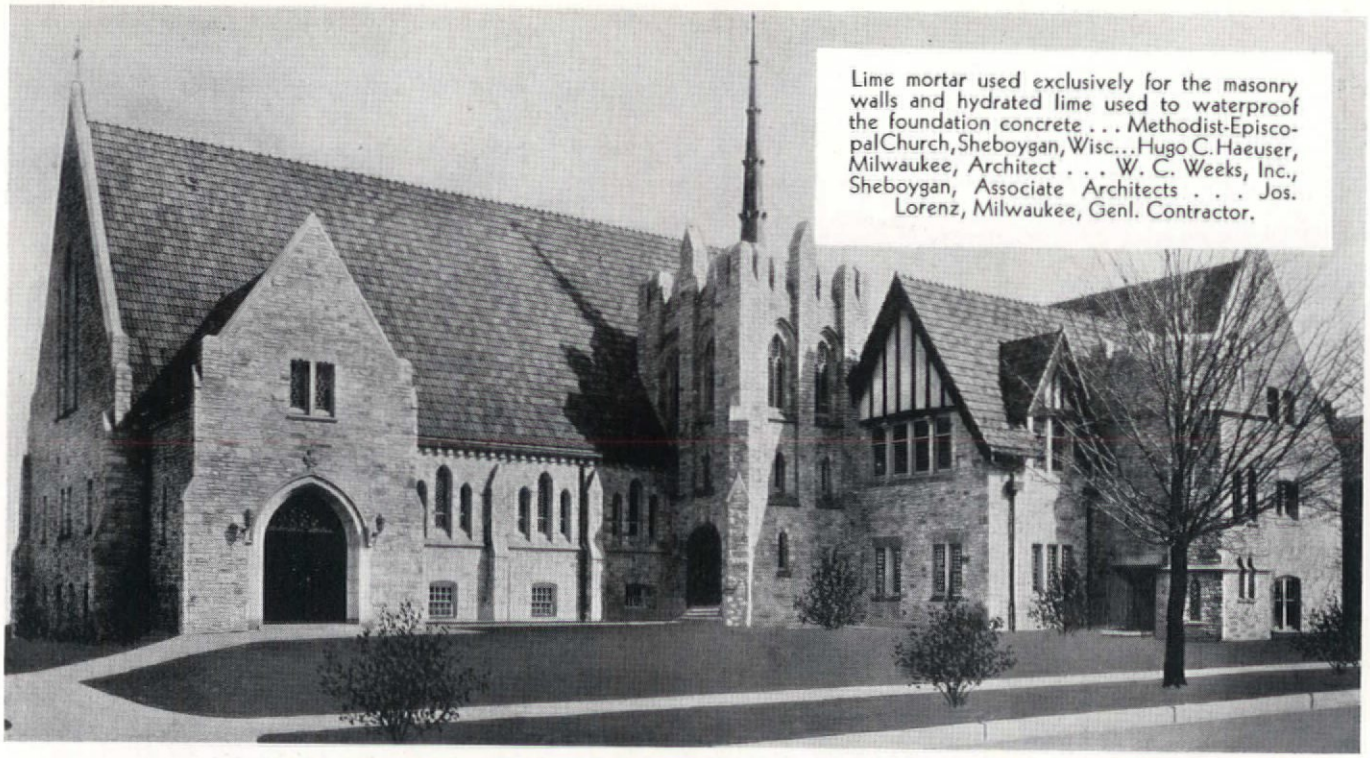
Send me at once, all charges prepaid, one copy of the new third edition of "The American Hospital of the Twentieth Century" for which I enclose $15. If this book is not in every way satisfactory I will return it to you within 5 days and you are to return the $15.

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A.R. 9-30



Lime mortar used exclusively for the masonry walls and hydrated lime used to waterproof the foundation concrete . . . Methodist-Episcopal Church, Sheboygan, Wisc... Hugo C. Haeuser, Milwaukee, Architect . . . W. C. Weeks, Inc., Sheboygan, Associate Architects . . . Jos. Lorenz, Milwaukee, Genl. Contractor.

LIME--For Enduring Quality in Mortar

THIS beautiful stone church will stand for years and bear testimony to the wisdom of the builders in having insisted on lime mortar as the bonding agent.

The architectural beauty of many buildings is frequently lost or greatly marred through the defacing discoloration termed "efflorescence."

Mortars rich in lime insure against this disfigurement and also the ensuing disintegration of the bond so essential to permanency.

Lime mortar also overcomes one of the most serious problems facing the construction industry today—that of leaking walls.

Toughness, elasticity and adhesiveness, so distinctive of lime mortar, are essential requisites for dry walls.

Very recent tests, of a highly authoritative nature, have confirmed the findings of the builders of years ago who knew and used lime mortar exclusively. Examples of old buildings still in a fine state of preservation attest to the permanency of lime mortar.

Full details on this important subject which is now engaging the serious attention of architects, engineers and contractors, are given in our new booklet, "Mortars and Masonry". Write today for your copy.

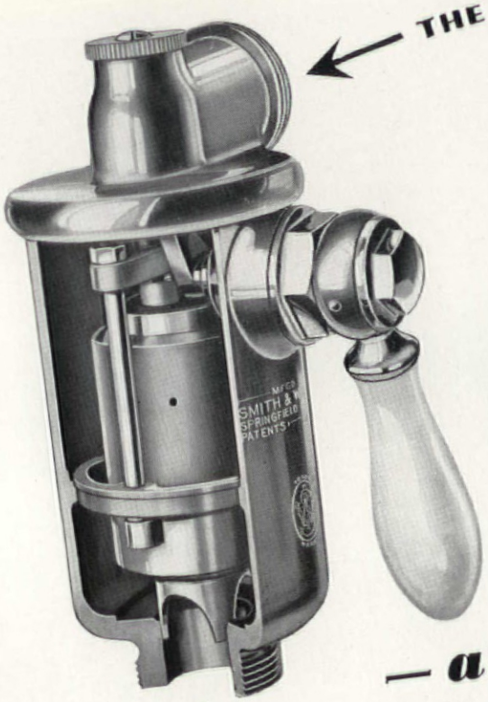


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NATIONAL LIME ASSOCIATION

An organization of leading lime manufacturers formed to encourage a better appreciation of the economic value of lime in all its uses.

162-A 713 CARRY BUILDING « WASHINGTON, D.C.



Completely Self-Cleaning

—an important result of simplified design— the SMITH & WESSON Flush Valve

In this valve the full head of water from the supply flows through undiminished, flushing out all dirt and foreign matter that may enter with it. There are no tiny orifices or air-tight fits to trap such sediment. The valve seat is ground on a 45° angle, assuring complete cleansing and a perfect seal.

Repeated tests have been made under extreme conditions of sand, silt, rust scale, etc., and it has been found impossible to clog the action of the valve.

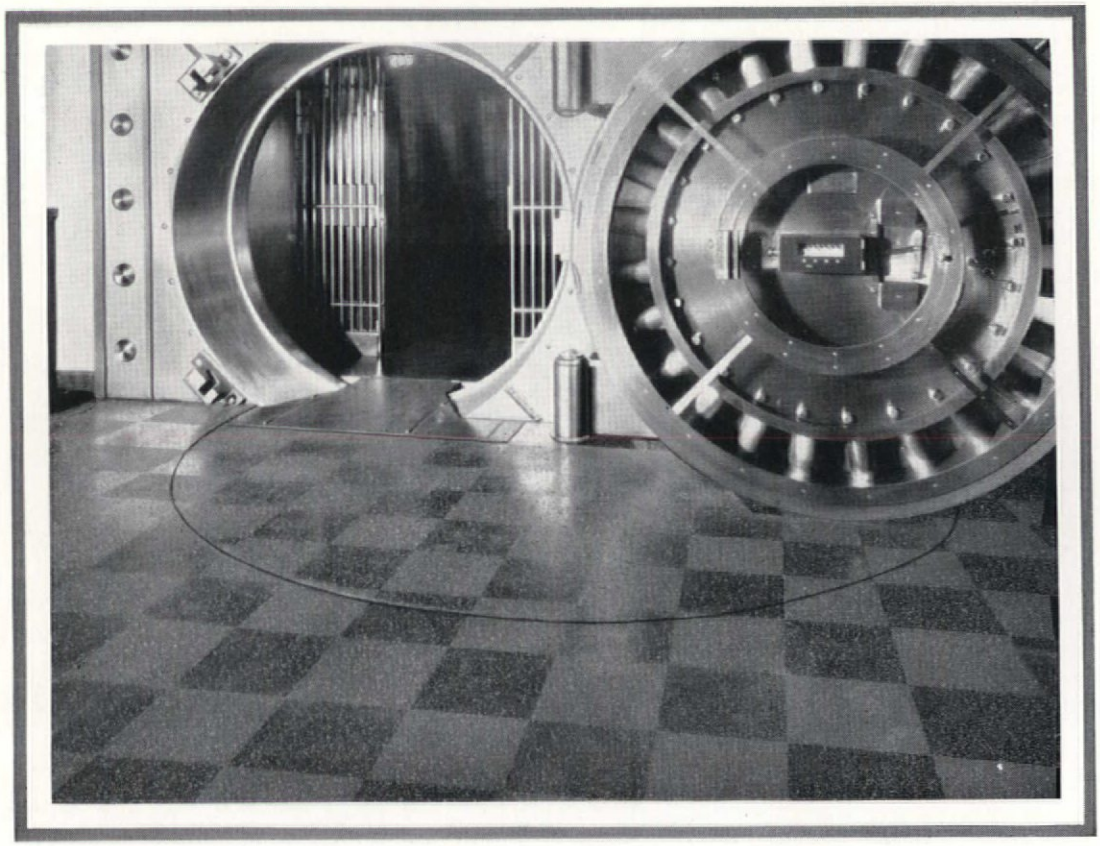
The Smith & Wesson Flush Valve is a complete departure from the conventional type, and deserves your consideration from that viewpoint. Its many features solve the problem of *attention-free* installations and effect economies that are certain to impress anyone interested in building construction.

For Further Information Write

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FLUSH VALVE DIVISION

SPRINGFIELD, MASSACHUSETTS



Armstrong's Cork Tile Floor in the Safe Deposit lobby of the bank of Commerce and Trust Company, Memphis, Tenn. Architect, Hanker and Cairns.

You can Bank on this Floor . . *and work on it, too!*



The dining-room in the residence of Mr. E. L. Doheny, Jr., of Los Angeles, has this attractive two-tone Armstrong's Cork Tile Floor. Installed by Van Fleet-Freear Co.

THE extreme versatility of Armstrong's Cork Tile has made it the "true cosmopolite" among floors. Whether it is installed in bank, office, or private residence, it is equally at home . . . gives the same flawless service.

In banks, where quiet is so essential, Cork Tile Floors—made of the purest cork—cushion footsteps, silence sounds, never become slippery.

In busy offices and shops, where foot-traffic is heaviest, the resistance of Armstrong's Cork Tile is remarkable. This custom-laid floor is easily cleaned, and, when properly cared for, will last a lifetime. An occasional waxing and polishing keeps it as bright as new.

And for private homes Armstrong's Cork Tile offers many interesting decorative possibilities. These floors are made in three rich, mellow shades of brown. In creating a floor of your own design you will also find that the thirty-one different tile sizes assure you unlimited opportunities.

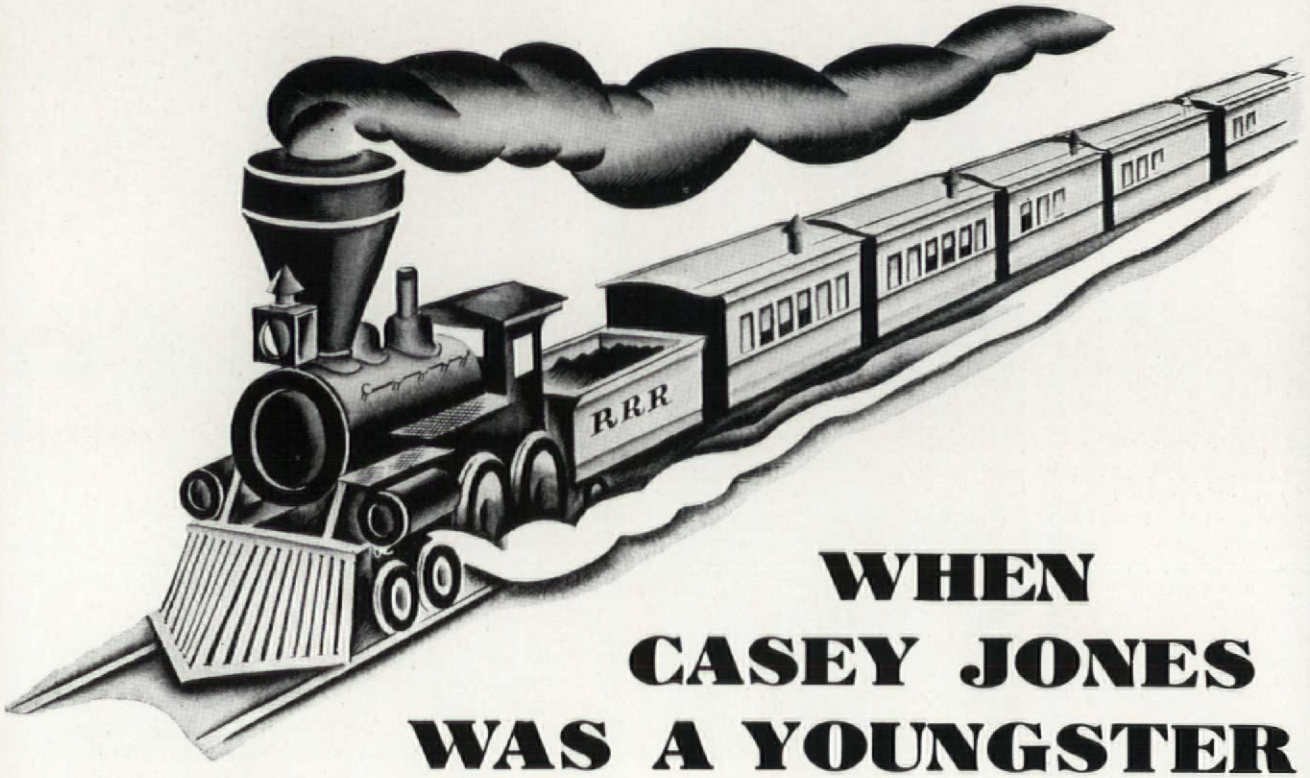
We have prepared a book for you completely describing Armstrong's Cork Tile. Write for "Custom-Built Floors of Cork." It also tells you about Linotile, another Armstrong's hand-laid floor. Armstrong Cork Company, Custom Floors Department, Lancaster, Pennsylvania.

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Armstrong's (A) Product

LINOTILE . . . . . CORK TILE

MADE BY THE MAKERS OF ARMSTRONG'S LINOLEUM

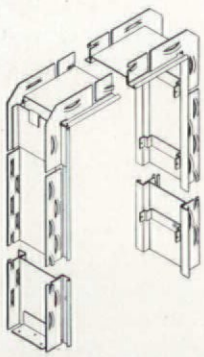


WHEN CASEY JONES WAS A YOUNGSTER

Many things have changed since Mr. Jones' youth. Even Doorways are not what they used to be—for Standing Trim is now no longer necessary. A comparatively new method eliminates the need—a method new in principle, but proven on countless important installations.

The Kalman Steel Buck (with or without integral Jamb) permits the clean, simple lines of marble slab construction without thickening the plaster for returns. A perfect bond is provided with the other elements of the wall structure, resulting in unity of action, and eliminating plaster cracks. A definite ground and termination for plaster is obtained.

If interested in this new and attractive method of constructing doorways, we shall be pleased to send our file folder on the subject.



Ask for photographs showing hotels, apartment buildings, hospitals, or private homes equipped with Kalman Steel Door Frames

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SUPPLYING THE *Breath of Life*



Life Sciences Bldg., Univ. of California, Berkeley. *Architect*: G. W. Kelham, San Francisco. *Mech. Engrs.*: Hunter & Hudson, San Francisco. *Structural Engrs.*: H. J. Brunnier, San Francisco. *Builders*: Dinwiddie Const. Co., San Francisco. *Heating Contrs.*, Latourrette-Fical Co., Sacramento, Oakland.



...*in the* **Life Sciences Building, University** *of* **California**

IN this classic building, every facility and comfort has been provided to make the course of study more enjoyable, more beneficial and valuable to the student. Everything is the best...including the air! Stuffy, dusty rooms would be as much out of place as obsolete equipment and textbooks.

Libraries, laboratories and lecture rooms are free from the slow anaesthetic of bad air. Pure, invigorating air is continually circulating... noiselessly, without drafts. It's drawn in from outdoors, filtered clean, tempered to comfortable warmth when needed, and then passed gently into the rooms ...by Sturtevant Unit Heater-Ventilators. The units blend in quietly with the appointments. And the vents are concealed... nothing detracts from the dignity of the exterior.

Sturtevant Unit Heater-Ventilators are adaptable to an endless variety of installations in schools, churches, institutions, office buildings, etc. You will be interested in our Catalog 361. Our nearest office will send you one...for the asking.



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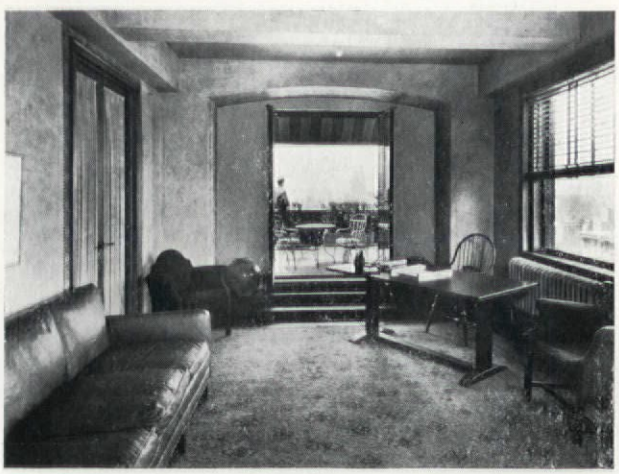
The Story of PENROSE V. STOUT

PENROSE V. STOUT is one of the younger group of New York architects, with an extensive suburban practice. His reputation, founded on residential work in Westchester County, has been enhanced in recent years by his designs for a number of apartment and community house groups at Bronxville, N. Y. A firm believer in the personal element in architecture, Mr. Stout's work shows, by its individuality and essential fitness, how thoroughly his principles are carried out in actual design. He is only interested in abstract design as it relates to human needs, which accounts for the combination of fundamental logic and delicacy of handling to be found in his work. Though a stylist in the proper sense of the word, he allows himself a freedom and variety of treatment which is in keeping with the principle that the personality of a client should find adequate response in a house designed for his use.



Brooklands Apartment development, in Bronxville, N. Y., a recent commission executed by Mr. Stout

Mr. Stout, a graduate of Alabama Polytechnic, is a member of the American Institute of Architects, and of the Architural League. Among those for whom he has designed residences, are: Arthur W. Lawrence, Joseph Walworth, Anthony H. G. Fokker, Dr. Henry Dwight Chapin, Robert S. Chapin, Dr. Frederick W. Pratt, Carroll L. Wainwright, Charles P. Luckey, and the late Theodore F. Merseles. Besides residential work, Mr. Stout has designed various types of buildings for the Village of Lawrence Farms, at Mount Kisco, N. Y., including the Lawrence Farms Country Club, and has done work for the Village of Bronxville and the Westchester County Park Commission. More important projects are the Women's Club and the Brooklands Apartment development, both at Bronxville, N. Y., the Charleston, S. C., estate for Hugh S. Robertson and the Banco di Napoli Trust Company in New York City.



International Commercial Photo

Office and roof terrace of Mr. Stout. Situated on the thirtieth floor of the Graybar Building, this suite commands an inspiring view of New York's skyscrapers

PENROSE V. STOUT
ARCHITECT
GRAYBAR BUILDING - NEW YORK

A.H.FULLER

June 26, 1930

F.W. Dodge Corporation
119 West 40th Street
New York, N. Y.

Attention Mr. Gayne T.K.Norton

Dear Mr. Norton,

Dodge has been a fountain of helpfulness to architects for many years and I find daily cause for gratitude for the service it puts at our disposal.

Sweet's Catalogue is a convenient, comprehensive and indispensable aid to my specifications. Its use keeps my catalogue files within reasonable proportions and makes the desired information readily accessible.

Your Plan Room Service should prove very helpful, likewise your Special Inquiry Department.

It is of vital importance that we get information concerning products best suited to the needs of our buildings and builders best suited to do the work. It is also important that the builders and manufacturers learn where their services or materials can be usefully applied. It is here that we find your News Service helpful.

This selective service affords the architect a means of controlling the news of the projects on his boards and having it transmitted at the proper time, direct to sources that should know about it, at a time when it is most useful.

When an architect is engrossed in the preparation of plans of a country house, he is not at the moment very much interested in show window construction, but if he is preparing plans for a business building, show window construction is of immediate interest.

From the foregoing, you see I have a very kindly feeling for your organization and I look forward to many years of cordial relations.

Sincerely,

Penrose V. Stout

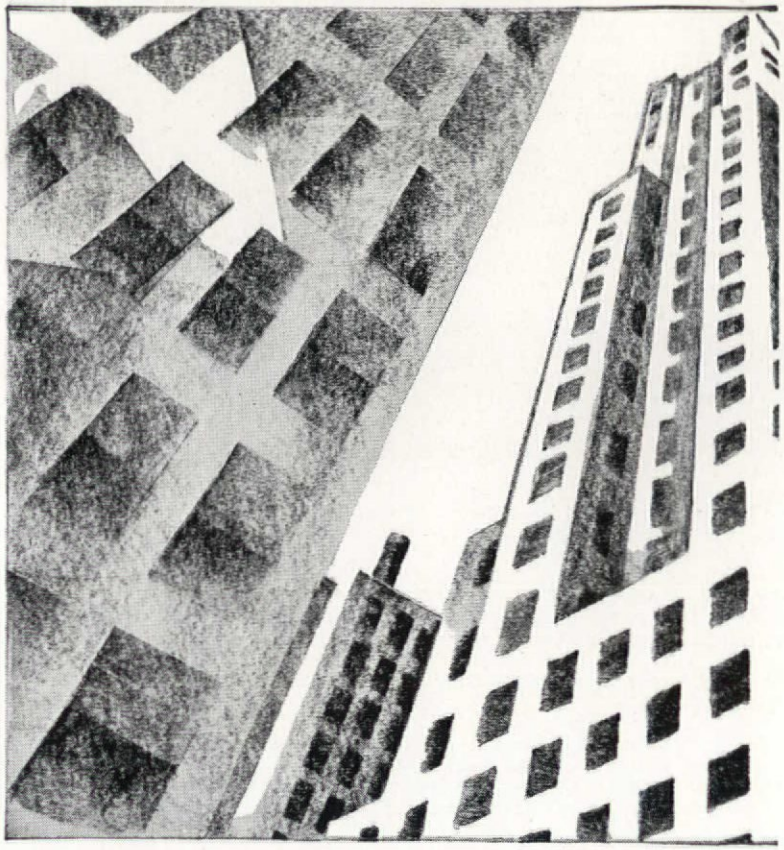
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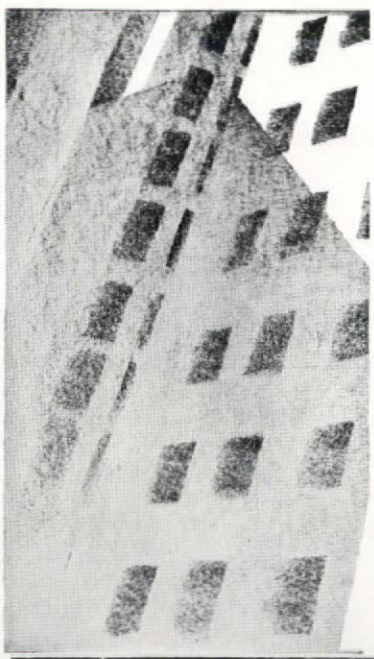
F. W. DODGE CORPORATION, 119 West 40th St., NEW YORK and PRINCIPAL CITIES



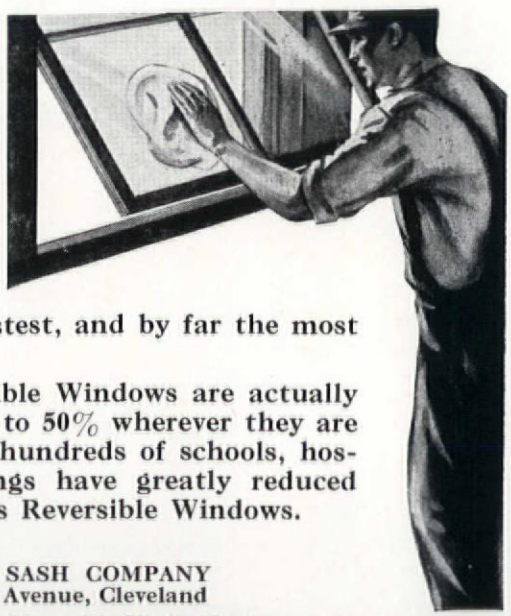
ACRES OF WINDOWS TO CLEAN

not once but

HUNDREDS OF TIMES!



Windows are installed once. But they must be cleaned scores upon scores of times as long as the building lasts! Economical use of the client's dollars demands that the architect concerns himself with the cost of cleaning windows as well as the cost of installation.



Inside window cleaning — possible with Williams Equipped Windows—is obviously safest, fastest, and by far the most economical.

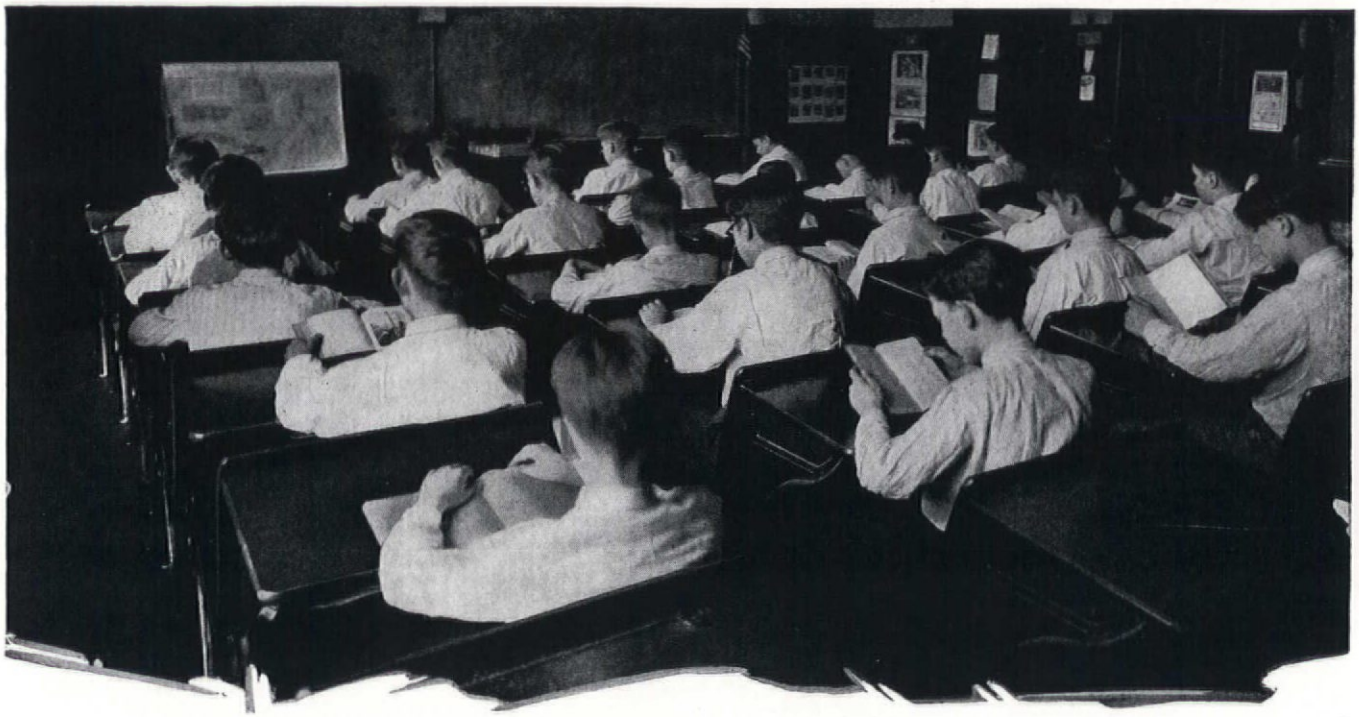
Consider this: Williams Reversible Windows are actually reducing the cost of cleaning 40 to 50% wherever they are used. Within the past 26 years hundreds of schools, hospitals, hotels and office buildings have greatly reduced maintenance costs with Williams Reversible Windows. Write for catalog.

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East 37th Street at Perkins Avenue, Cleveland

For 26 years manufacturers and installers of Reversible Window Equipment

WILLIAMS REVERSIBLE WINDOW EQUIPMENT

Clean Your Windows from the Inside



PeerVent Service is Valuable

IN connection with the planning and installation of the PeerVent System, PeerVent Engineers give every possible service to engineers and architects. Every installation has individual engineering attention based on PeerVent's long experience, to obtain the lowest cost consistent with economical operation.



Take advantage of this excellent service and benefit from PeerVent's many years of experience in the heating and ventilation field. As you know, PeerVent was the pioneer in Unit Ventilation. The first PeerVent, built 19 years ago, was then based on 22 years of experience.

The PeerVent System gives perfect results in connection with any high pressure, vapor, vacuum, gravity or modulation steam heating system.

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BRIDGEPORT, CONNECTICUT
Pioneers in Unit Ventilation
Resident Engineers in Principal Cities from Coast to Coast

PAR-LOCK SUCCESS

Results from Scientifically Blended ASPHALTS

THE idea of grit embedded in a bituminous coat, as a plaster base, is an idea older than Par-Lock.

But there is no record of successful applications until the Par-Lock organization solved the problem of correct materials and methods.

Even today, contractors will occasionally tell an architect, "I can give you the same thing as Par-Lock."

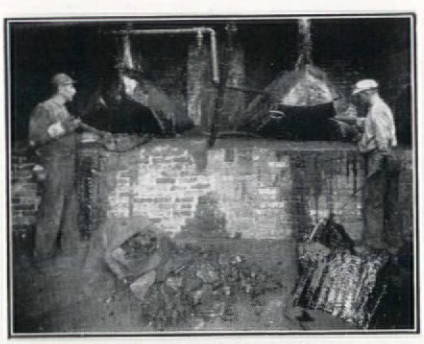
A review of such efforts and the resulting plaster failures is the reason for this advertisement.

Par-Lock does not need protection from these experimenters—even the protection of its existing patents—because such competition defeats itself. But the architect does need protection.

There are Asphalts and Asphalts

Behind these casual attempts to imitate Par-Lock will be found a careless notion that all asphalts are pretty much alike—a fundamental mistake.

Many waterproofing materials classed as asphalts are by-products of petroleum and vary in accordance with the nature of the crude and the process of refining. Each may be excellent in its place.



Kettling Par-Lock Asphalt

Lake asphalts from distant islands are wonderfully uniform over a term of years yet varying in accordance with their sources in ductility, adhesiveness and melting point.

Native asphalts, that are mined like coal, afford hardness at the expense of other qualities.

Methods of preparation also vary. Asphalts are sometimes marketed as native solids, sometimes kettled or otherwise reduced to liquid form, sometimes mulsified for thinning with water.

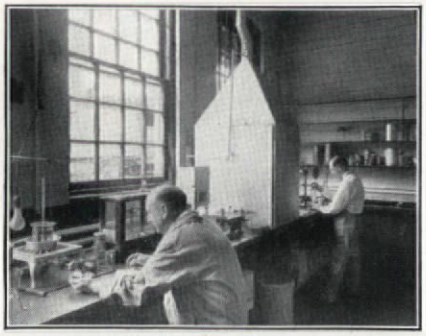


Filling Drums of Par-Lock Asphalt

What Par-Lock Demands in Asphalt

Par-Lock calls for an asphalt sufficiently liquid to flow readily through the Par-Lock gun at normal temperatures. Yet it must have body to form a heavy coating and to hold the grit. There must be ductility to cushion expansion strains and sufficient hardness (with high enough remelting point) to hold the plaster firmly under any possible temperature conditions.

We meet these requirements by blending imported lake asphalts (for ductility and adhesiveness) with a native asphalt that increases the hardness.



Testing Asphalt in Vortex Laboratory

They are kettled according to a formula that is the result of much research, thinned with volatile ingredients, whose composition was learned by long experimentation and placed in 100 barrel tanks for seasoning and decantation, before shipment in new steel containers bearing the Par-Lock label.

Process Tested at Every Stage

All materials and each run of blended asphalt are sampled and subjected to exacting physical and chemical tests in our laboratory.

As a result, when the 55 gallon drums of Par-Lock asphalt go forth to Par-Lock Appliers, we know they will do the job they were meant to do.

The same confidence cannot be extended to any casually selected waterproofing asphalt. Tales of grief that we could tell bear ample testimony to this.

It costs more to produce an asphalt this way than to shop for miscellaneous products, but the confidence you can repose in the Par-Lock Applier (our sole outlet) is well worth the difference.

Par-Lock
Plaster Key

THE VORTEX MANUFACTURING COMPANY
1994 West 77th Street · Cleveland, Ohio

Write to PAR-LOCK APPLIERS OF (Naming City) at Address Given Below

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425 Orange Street

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BALTIMORE
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BUFFALO
958 Ellicott Square Bldg.

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NEWARK, N. J.
24 Commerce Street

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50 Church Street

PHILADELPHIA
1700 Walnut Street

PITTSBURGH
207 Fulton Building

SCRANTON
Cedar Avenue

ST. LOUIS
1514 Chemical Building

TORONTO
2258a Bloor Street, West

TRENTON
339 Broad St. Bank Bldg.

YOUNGSTOWN
503 City Bank Building

WILKES-BARRE
904 Second National Bank Building



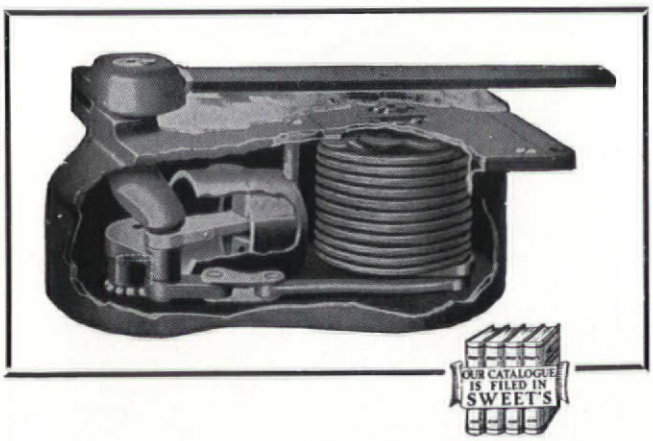
Rixson No. 20 and 25 Single Acting Floor Checks, insuring positive closing in a single swing, were used on the Paramount Theater Building. The architects were C. W. and George L. Rapp; the contractors Thompson-Starrett, Inc. (Photo by Wurts Bros.).

At the Daily Gateway of Thousands

If you could count the number of people who enter the Paramount Theater Building during one day—and remain to watch the night crowds of Broadway surge in and out of this popular theater — Then you could appreciate the sturdiness of the Rixson Floor Checks which patiently close these doors millions of times in a year—endless trillions of times in their years of usefulness.

We present this building merely to illustrate the fact that architects have generally specified Rixson Checks on buildings of this type throughout the country. You can be assured that so universal a choice is based on performance.

THE OSCAR C. RIXSON COMPANY
4450 Carroll Avenue Chicago, Ill.
New York Office: 101 Park Avenue, N. Y. C.



No. 20 *and* 25 Single Acting FLOOR CHECKS

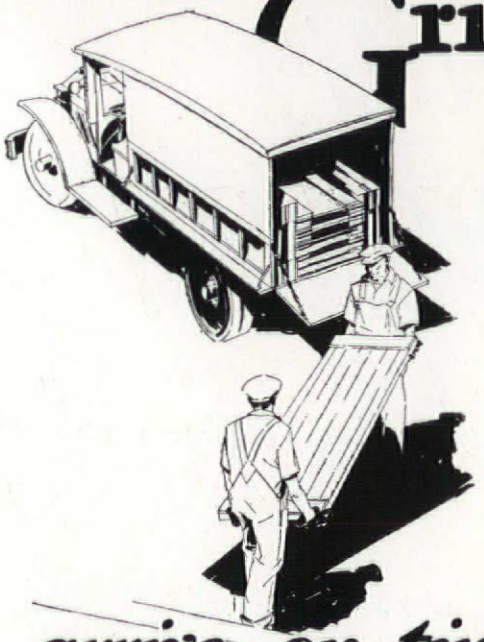
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Clinton Grilles



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DIMENSIONS for grille openings are often the last data available . . . yet how important grilles are. Without the grilles installed the building is not finished nor can it be turned over to the owners as completed.

The architect, however, can take the delivery of Clinton Perforated Metal Grilles for granted. All kinds of metal in standard sizes are kept in stock. Dies are always in condition. We have the facilities and realize the importance of closely following the builder's schedule. In extreme cases this company has shipped grilles within twenty-four hours after all information was in our hands.

We would be glad to send you our Grille textbook showing stock designs and list of metals and finishes. Clinton Grilles are sold by local representatives. You can *tell* a man exactly what you want rather than write about it.

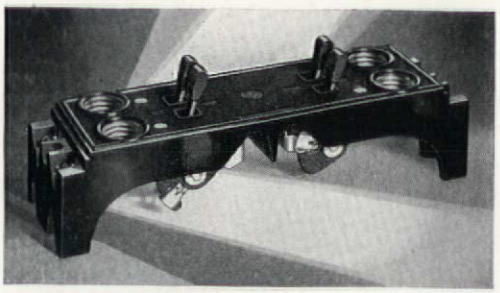
See Sweet's Architectural and Engineering Catalogs for Specifications.

WICKWIRE SPENCER STEEL CO.
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A few desirable territories are still available for responsible dealers to distribute Clinton Grilles

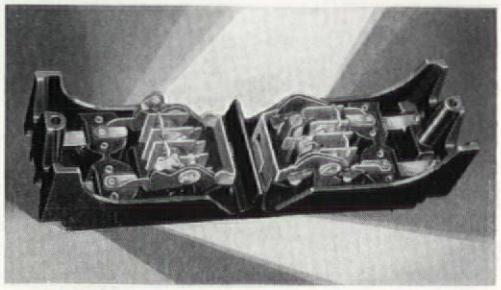
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Send me....copies of your latest Handbook on Grilles.
Name .....
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The New (FA) Leader Type LNTP Section

A New Panelboard —typically (FA)

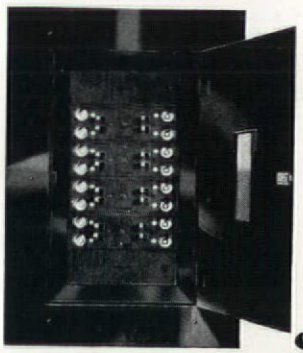
Combining (FA) original sectional construction features with great compactness and light weight



SUPPLEMENTING the progressive (FA) line of Panelboards comes this new addition, the (FA) Leader Type LNTP.

Having originated the sectional type, now universally accepted, (FA) considers changing needs and fills them, bettering each wiring job where (FA) Panelboards are used.

With all the basic features of the original (FA) construction retained this new type (FA) Panelboard includes a newly designed one piece, moulded section made of Bakelite, an improved arrangement of bus bar connection and other very practical features. It is narrow and light in weight—making it easier to handle and install. All current carrying parts are molded into or riveted to the back of section.



Write for the new Bulletin No. 50 on Type LNTP. See the (FA) man in your territory or write direct about your panelboard and switchboard problems.

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Archt. & Engrs.—Mills, Rhines, Bellman & Nordhoff, Toledo, Ohio. System—Power—440 volt—3 phase, 3/3 wire—Light —208/115 volt—3 phase 4 wire

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See the Trumbull "Circle T" catalogue in the new 4-volume Sweet's, Vol. D, pages 5164-5165.

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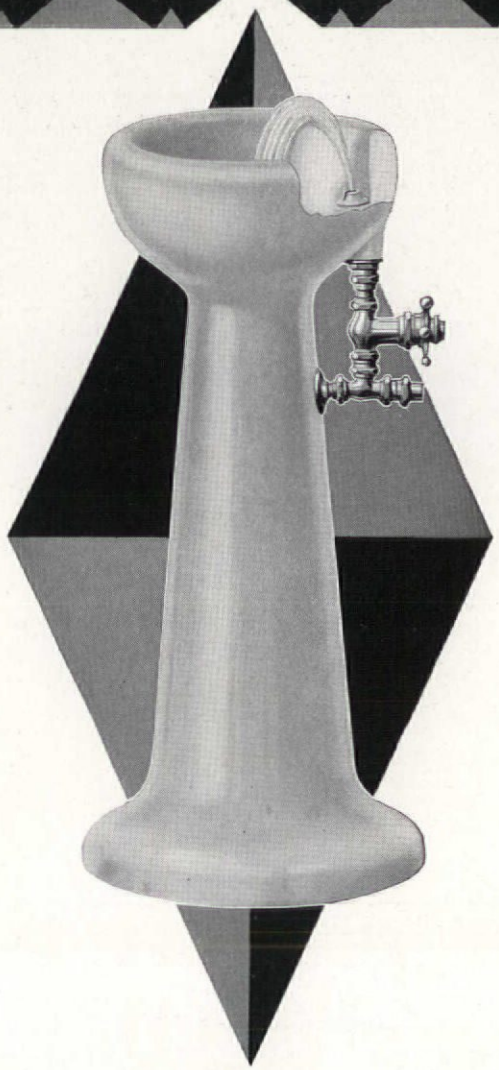
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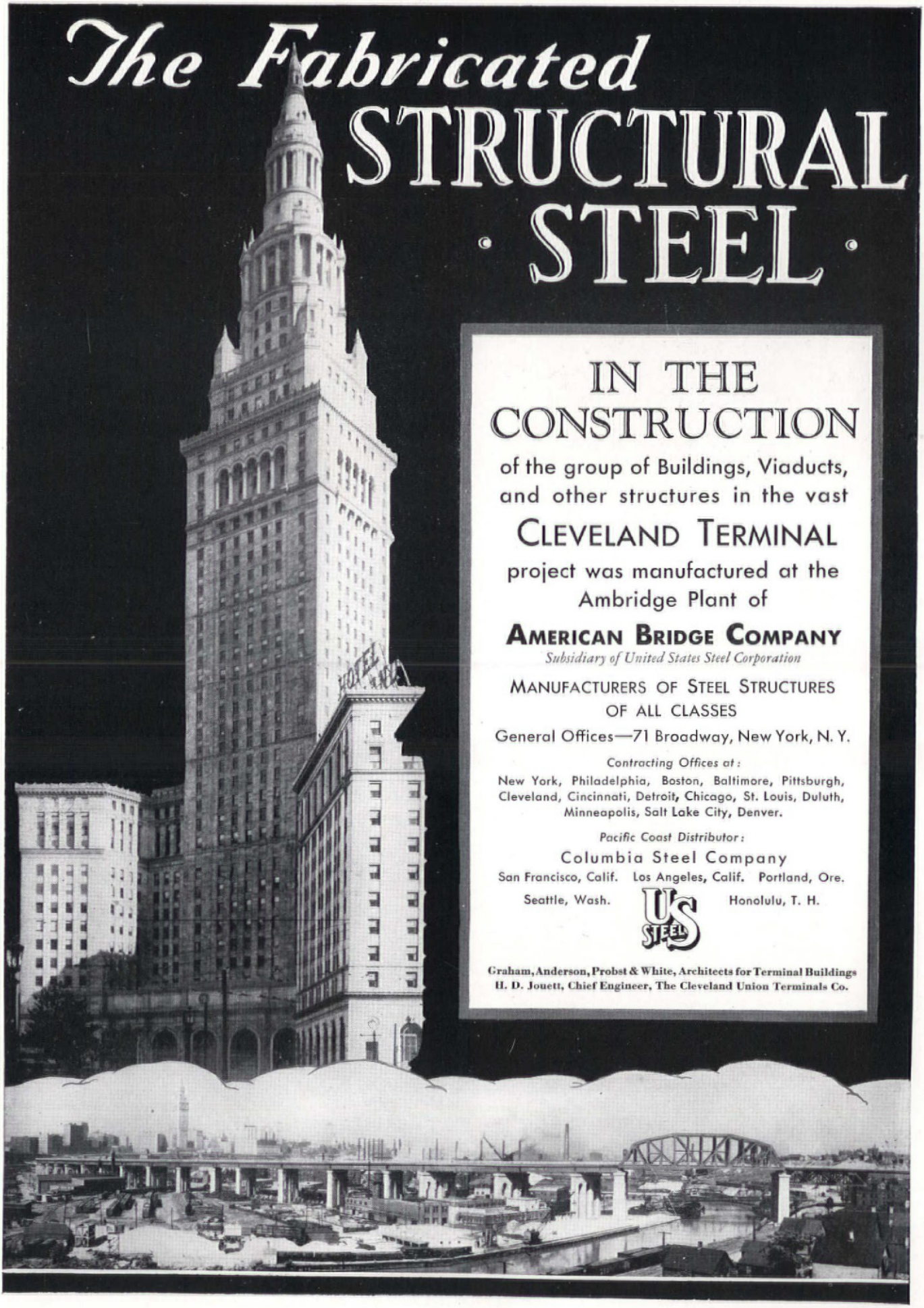
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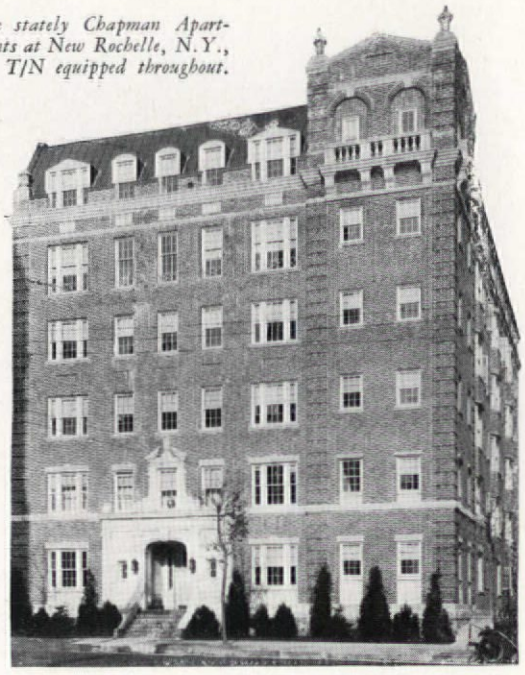
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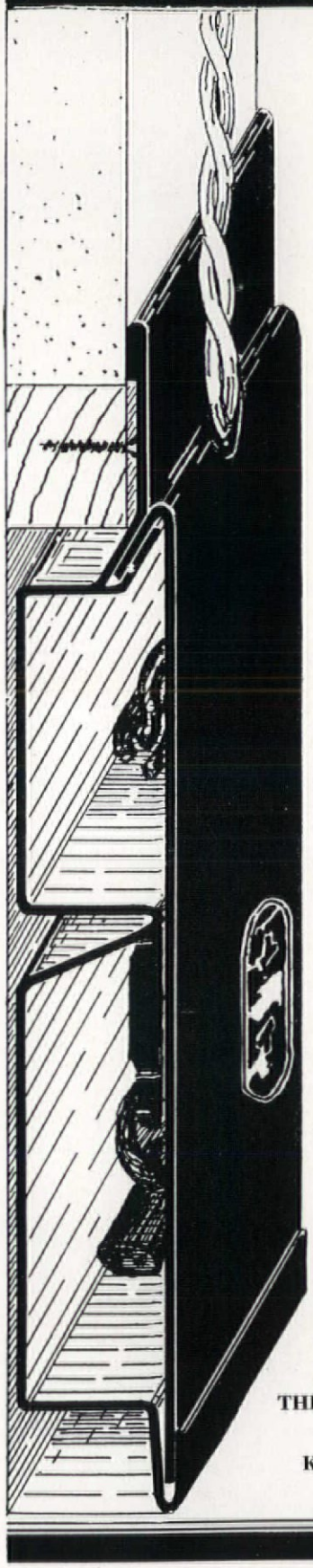
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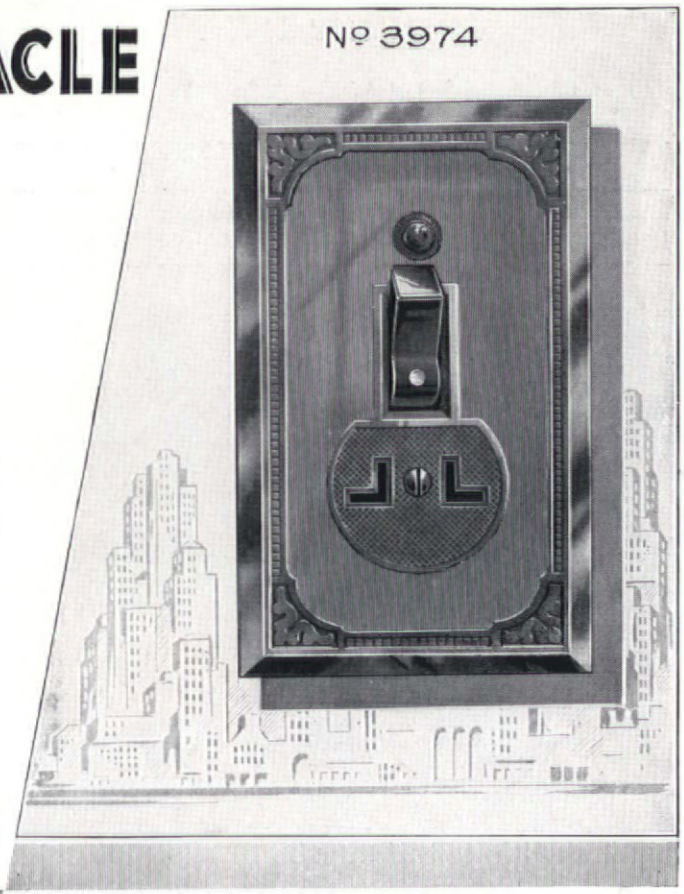
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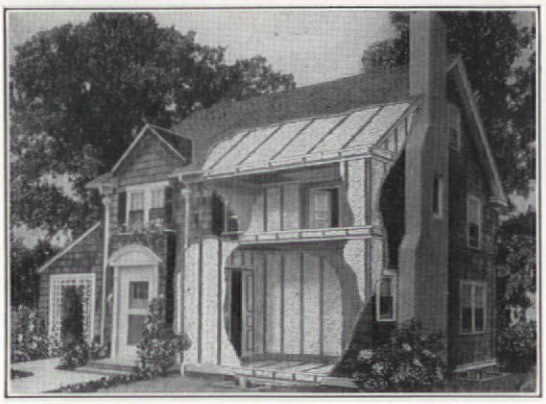
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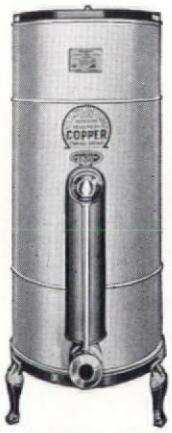
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Gas Under Fire



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TURBO-AQUATHERM

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A revolutionary achievement in the science of hot water boiler design. Gives a constant supply of fresh, ever-clean, rust and sediment free hot water at the lowest fuel cost. Adds years to the efficient life of the boiler.

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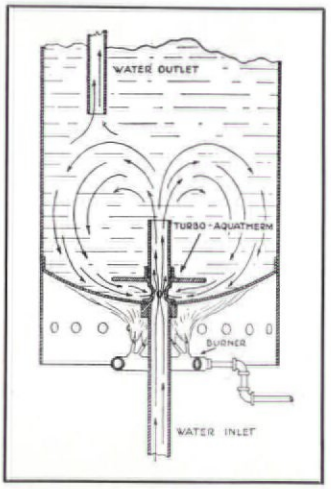
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The accompanying diagram shows clearly the action of the water which actively scours the bottom of the boiler whenever the water faucet is open.

This simple device performs four vital and important functions: It prevents burnouts in boiler or heating unit. Keeps the water fresh so that it may be used for cooking as well as other household purposes. It greatly increases the thermal efficiency of the boiler and reduces the time required to secure a supply of heated water.

The TURBO-AQUATHERM can now be had on all Dahlquist copper range boilers and automatic storage systems. It adds little to the cost but pays tremendous returns in lower fuel bills, quicker hot water service and longer life.

Write for full particulars.



Arrows show action of water when drawn through TURBO-AQUATHERM, scouring bottom of boiler and preventing any accumulation of sediment.

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for homes, offices, hospitals, schools, etc.

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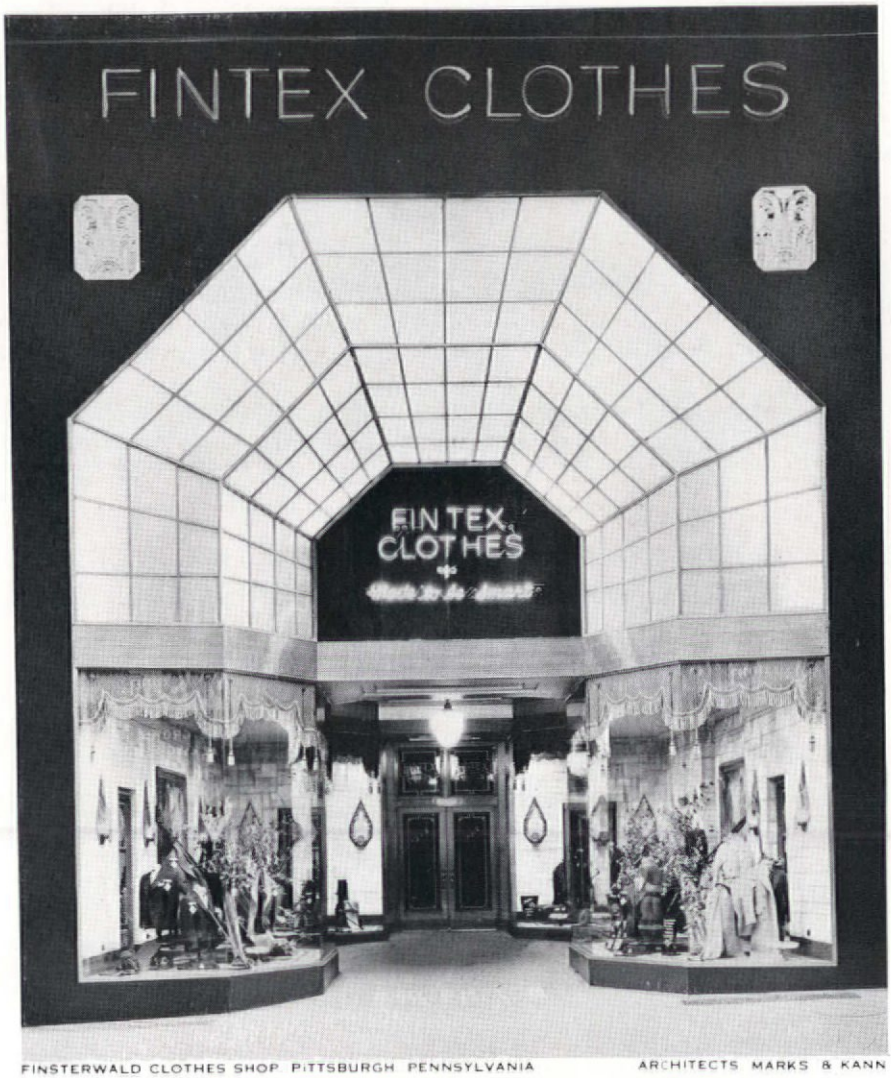
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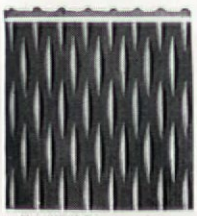
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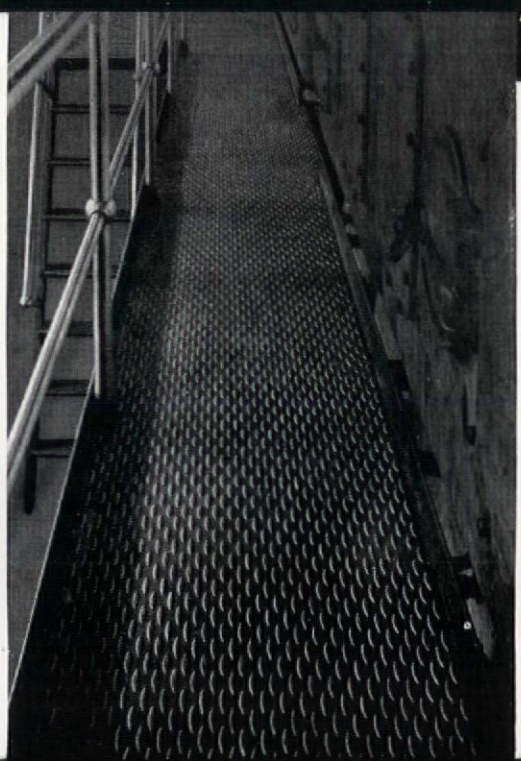
Platforms Like This Need Safe, Anti-Slip "A.W." Floor Plate



"A.W." Diamond
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Furnished in rolled steel (also in aluminum) and all commercially-rolled metals, in thicknesses of from ⅛" to 1".



"A.W." Diamondette
(¼ size)
Furnished in rolled steel (also in aluminum) and all commercially-rolled metals, in Nos. 16 to 12 Gauges, and in other thicknesses up to ⅜."



"A.W." Floor Plate makes platforms, floors and other under-foot surfaces non-slipping and safe. The raised diamond pattern gives traction and anti-slip qualities at all times. The round-top, oval-shape diamonds are spaced and proportioned so that feet get a firm, sure foothold.

"A.W." Floor Plate is also self-draining from every angle, as the raised pattern has no flat surfaces to accumulate oil, water or refuse. This is an additional safeguard against slips and falls.

Samples of "A.W." Floor Plate, with interesting booklets, gladly sent on request. Write us.

ALAN WOOD STEEL CO.

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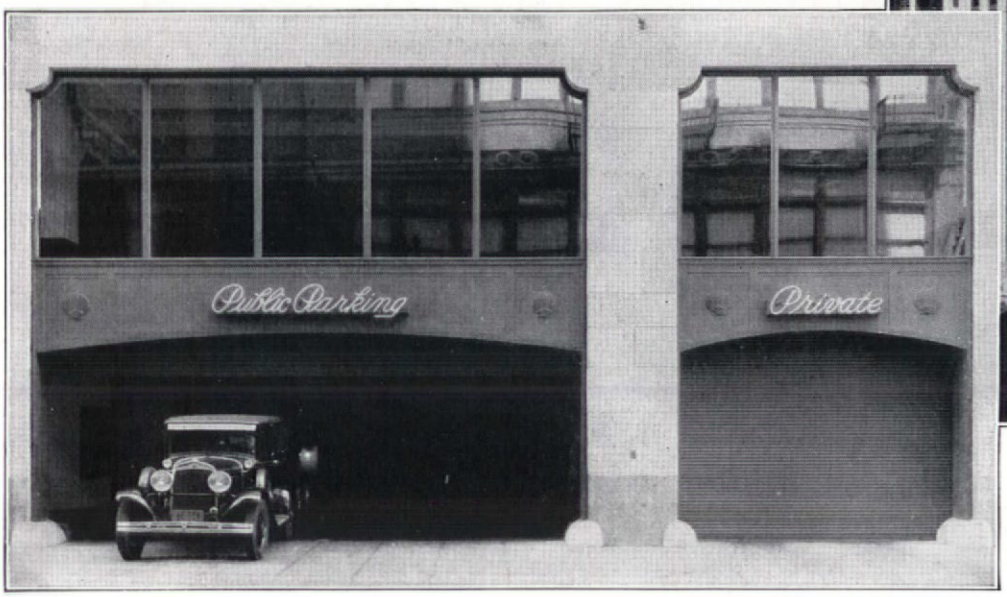
Philadelphia New York Boston Dallas Seattle San Francisco Los Angeles

"A.W." Diamond Pattern Rolled Steel FLOOR PLATE

modern—



Inset photograph shows two of the Kinnear Rolling Steel Doors used in the new Shell Oil Company Building in San Francisco. Modern in every respect, it was only natural that Kinnear Rolling Doors should be chosen for this magnificent edifice.



YES, modern as the newest building from a standpoint of efficiency, yet not new or untried. Kinnear not only originated the rolling steel door, but has been responsible for every worth while improvement in design and construction. You'll find them in skyscrapers, factories, warehouses, terminals — everywhere the best in rolling doors is wanted.



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Cabot's Quilt is now available in a new INCH thickness, designed to meet the growing demand for greater effectiveness of insulation. Specify INCH Quilt for all heat and cold insulation, and sound-deadening, where maximum results are required. One layer of INCH Quilt takes the place of several thicknesses of thinner material, thus reducing installation costs. Rolls contain 125 sq. ft. instead of 250 sq. ft., because of greater bulk. Cabot's INCH Quilt is also available on special order made with asbestos in place of Kraft.

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Gentlemen: Please send me a free sample of your new INCH Quilt

Name .....

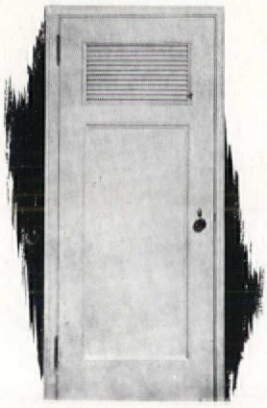
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THE METAL VENTILATOR WITH INVERTED "V" LOUVRES?



TYPICAL DOOR PANELOUVRE EQUIPPED.

Regardless of what style or type of building you may be planning, . . . whether you are arranging for interior cross circulation—or making provision to take fresh air directly from the outside,

PANELOUVRE SOLVES YOUR PROBLEM!

Artistic, Economical, and Rugged, it is also the most practical, as it is impossible for it to get out of working order. Metal moldings may be had for one or both sides if desired, thus further enhancing the appearance of the installation.

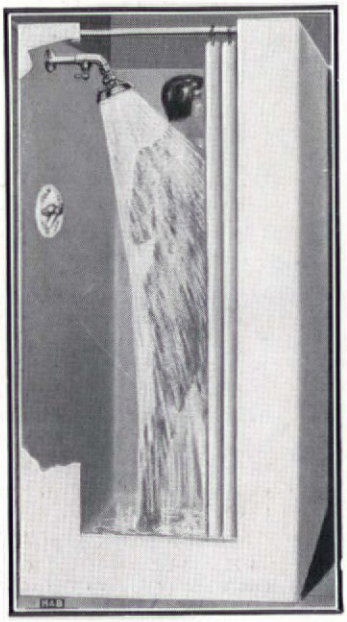
If you are unfamiliar with our latest development for ventilating thru single panel doors, our Model D-4 will prove a revelation. Full information will be supplied on request—without, of course, any obligation.

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BRIDGEPORT . . . . CONN.

NIEDECKEN

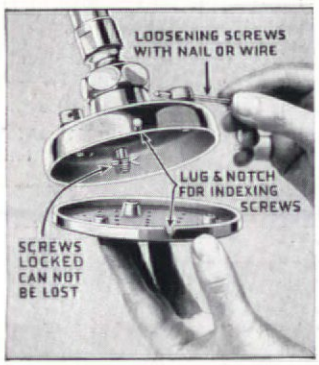
Niedecken Shower Face is radially drilled furnishing the usual generous shower spray with less water: a valuable economy feature



Niedecken Mixer, for shower and tub, is recognized the world over as the foremost in design, construction and efficiency

Positively Leak Proof Shower Stall

Niedecken Shower Stall is made of a continuous 1/8 inch copper bearing steel—which, with the riser, is welded to the bottom: making it positively leak-proof for all time.

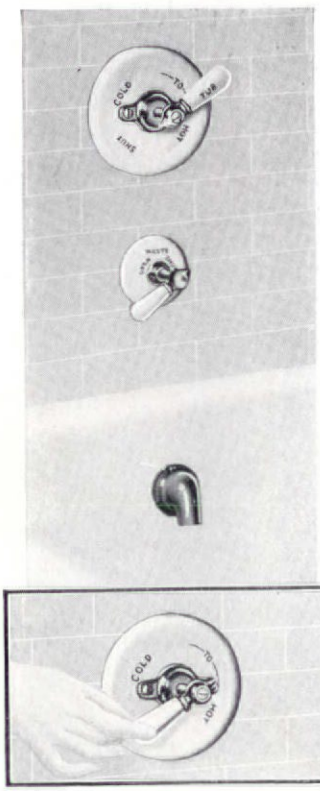


Easy Clean Shower Head

Face of shower head completely removed by simply loosening three screws. After cleaning, face is replaced—a set of notches guiding for correct placement and alignment as when originally assembled.

PATENTED MIXER . . . CONTROL

Patented mixer control, for shower or tub, provides a predetermined maximum hot water temperature. This prevents scalding, and also the waste of water as in ordinarily obtaining the correct water temperature. Also, one valve operates the mixer instead of two, as ordinarily used. Write now for details: acquaint yourself with this new bath advancement, for your own information and the benefit of your clients.



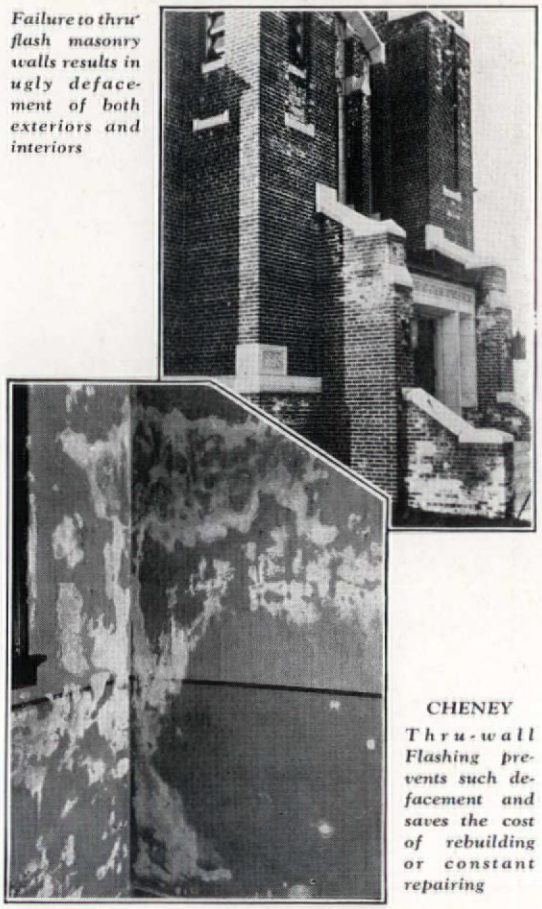
Write for Complete Details Now

Write now for complete details regarding Niedecken Shower and Tub Fixtures and Niedecken Features of unequaled advantages. Have Niedecken in your files—and Niedecken in your mind for the most advanced bath equipment improvements.

HOFFMANN & BILLINGS
. . . . . MFG. CO.
201 Becher Street
M I L W A U K E E
W I S C O N S I N

DOES NOT BREAK THE BOND

Failure to thru-flash masonry walls results in ugly defacement of both exteriors and interiors



YOU CAN POSITIVELY PREVENT
Seepage - Leaks - Efflorescence
in Masonry Walls with

CHENEY
INTERLOCKING WALL FLASHING

Cheney Interlocking Wall Flashing is the only Ready-to-use Thru-wall Copper Flashing that runs entirely thru the masonry wall and forms a positive unbreakable key-bond in every direction within the mortar bed. It scientifically solves the problem of seepage in masonry walls and positively prevents leaks, efflorescence, disintegration of the walls, and the rusting of steel spandrels and lintels from this cause.

It does not break the bond because it is keyed both horizontally and vertically on both sides of each strip. The ends of the strips hook together to form a continuous course.

The unbreakable key-bond feature of CHENEY FLASHING is of the utmost importance in the construction of high buildings where the swaying of the structures tends to loosen coping stones and parapet walls and hurl them to the ground.

Cheney Interlocking Wall Flashing is economical in cost and application, as it requires no soldering, special fitting or loss of time. It is built into the mortar bed as the masonry progresses.

Cheney Flashing is Standard with leading Architects and Engineers and the many outstanding construction jobs throughout the country in which Cheney Flashing has been installed are sufficient proof of its merits.

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DOES NOT BREAK THE BOND

And the installation will last forever. "GALVADUCT" has a protective coating of zinc, applied electro-chemically, on the outside, and a special enamel inside.

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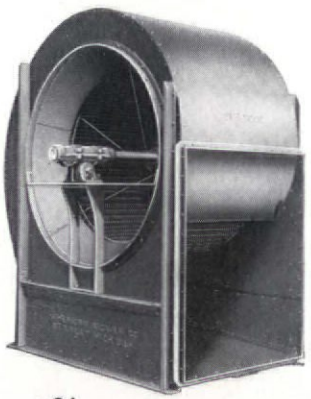


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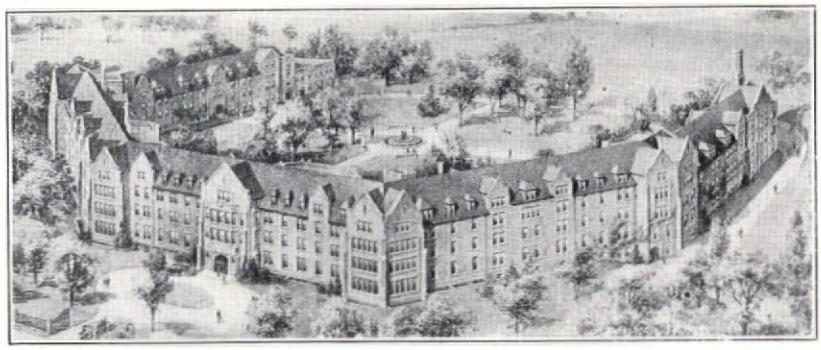
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Waynesboro , , , , Pennsylvania

BUSINESS CHAIRS *for the* GENERAL OFFICE

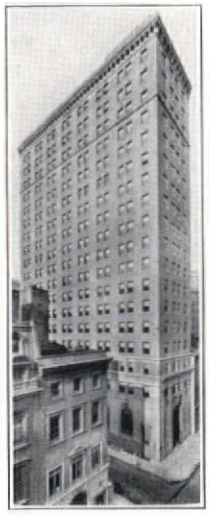


THE impression value of the general office is a most important factor in the building of business prestige. With this thought in mind, the importance of office furniture in relation to the general decorative scheme will be readily apparent. In B. L. Marble Business Chairs are combined "eye value", sturdy strength and long life. There is a B. L. Marble chair for every business requirement ranging from the office of the Chief Executive to the Information Clerk. Catalog available to Architects.

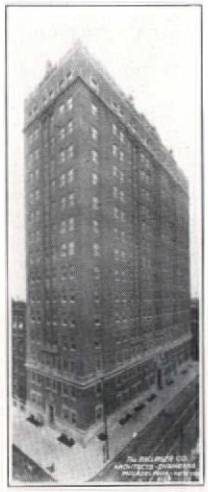
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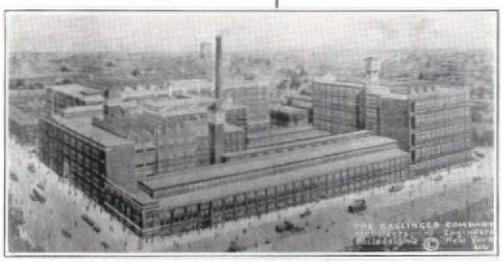
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HOTEL JEFFERSON DAVIS, MONTGOMERY, ALABAMA

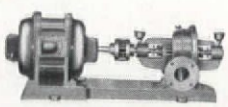
SEE OUR Catalogue in SWEETS

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The Hotel Jefferson Davis is WESTCO equipped throughout. These pumps unfailingly circulate an abundance of fresh water even when all of the rooms are occupied. Westco Turbine Pumps are also employed for circulating brine in the refrigerating system of this fine, modern hotel.

Trouble-free performance, economy and wide operating range have distinguished Westco as being the ideal pump for booster service and brine circulation in tall buildings.

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- No end thrust at bearings due to perfect hydraulic balance.
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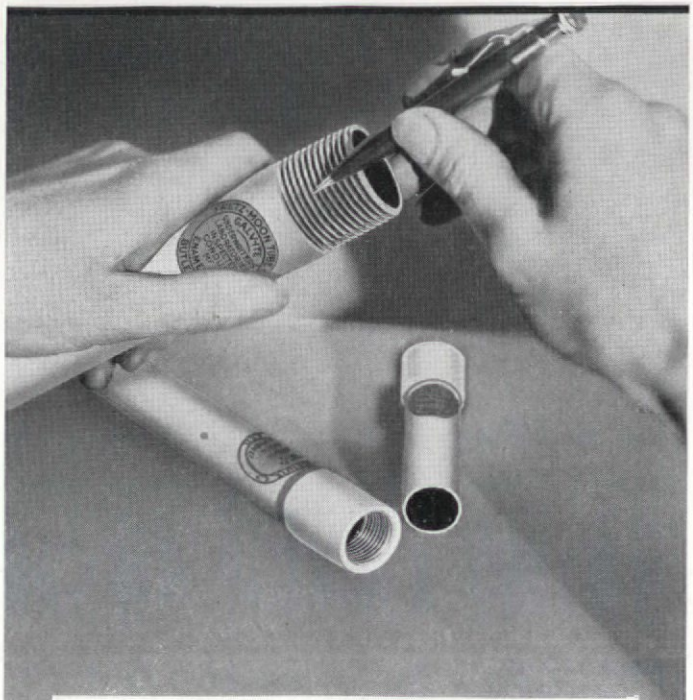
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RIGID CONDUIT

GEORGIA MARBLE



LIGHT HOUSE
ON BELLE ISLE, NEAR DETROIT
Albert Kahn, *Architect*

The inscription at the base reads:

WILLIAM
LIVINGSTONE

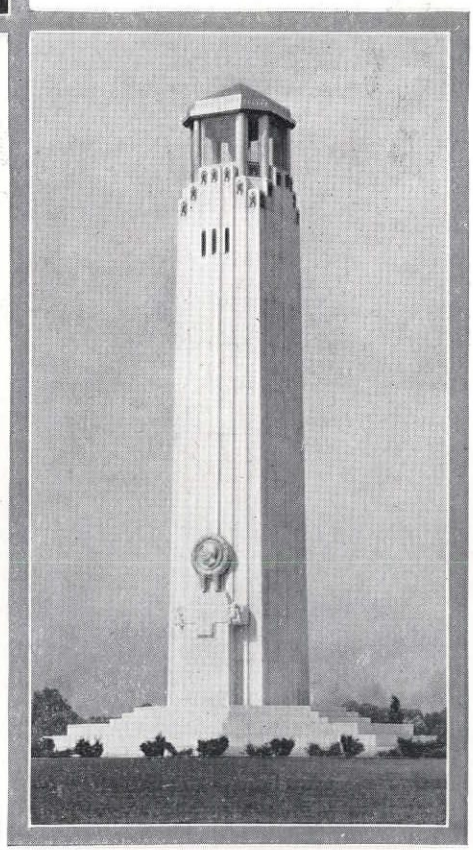
This light house is erected by the Lake Carriers Association and the citizens of Detroit to honor the memory of William Livingstone, President, Lake Carriers Association, 1902—1925, and throughout his active life one of the most prominent and public spirited citizens of Detroit.

1844—1925

LIGHT HOUSE

This is the only light house under U. S. Government supervision built of marble. The *architect* and the *donors* were unwilling to permit any but a time tried material to be used for this project. Although Georgia Marble had never been used for a light house, it had been used for *fountains, statues* exposed to the weather, *memorials, mausoleums,* and hundreds of *monumental public buildings* and *commercial buildings* from Porto Rico to Canada, and coast to coast. Past performance gives ample assurance that Georgia Marble withstands punishing weather changes.

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SASH CHAINS



"Red Metal"
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Steel Sash Chains

Have been specified by discriminating architects for over 45 years

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MR. ARCHITECT:

Our engineering staff is at your service for free consultation regarding hard water or purification problems.

or wherever soft water should be used, is more economically and efficiently secured with rapid rate upflow zeolite water softeners.

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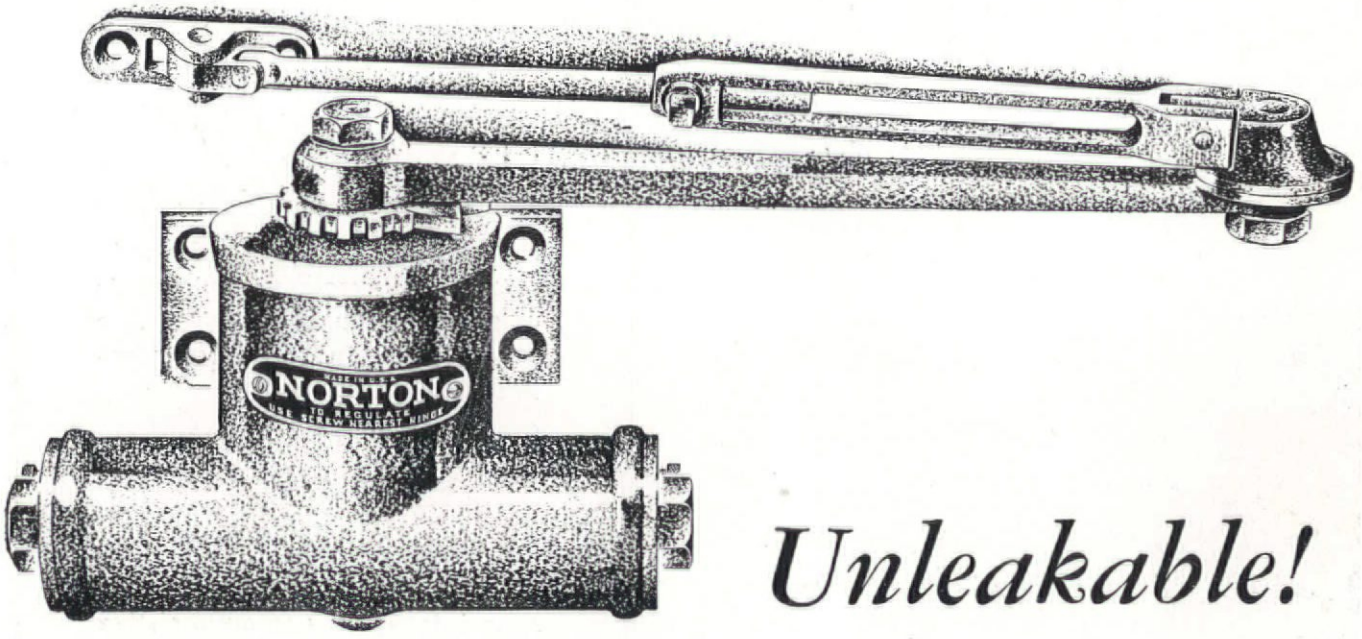
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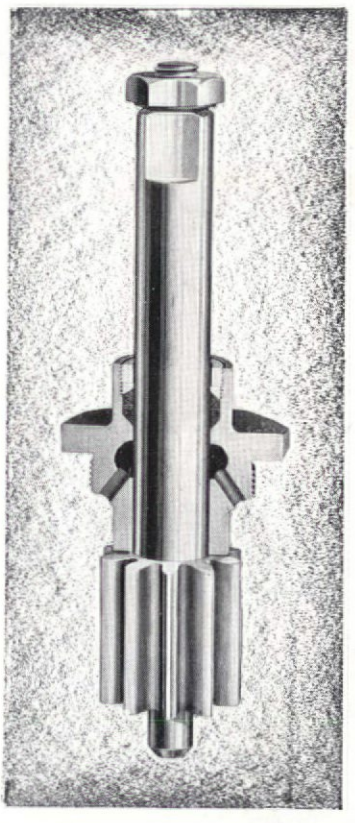
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NORTON PERFECTS NEW TYPE PACKING NUT WHICH ELIMINATES ANY POSSIBILITY OF LEAKAGE . . . . . .

NORTON has perfected, in its own research laboratories, an ingeniously recessed packing nut which absolutely prevents leakage and which greatly reduces friction and wear. Too, it permits the use of a specially developed mineral oil, which is preferable to the alcohol and glycerine mixture commonly used in door closers. An ideal lubricant, it insures continuously efficient operation, does not evaporate and does retain its life and body. ▲ ▲ Other improvements in the 1930 NORTON include a 15% increase in bearing space (resulting in a 25% increase in life) and a sturdier, more resilient spring. ▲ ▲ Now, more than ever before, the NORTON stands supreme. Our iron-clad guarantee insures the perfect operation of every door closer for two years when our recommendations are followed. And NORTONS that have operated millions of cycles are still in service.



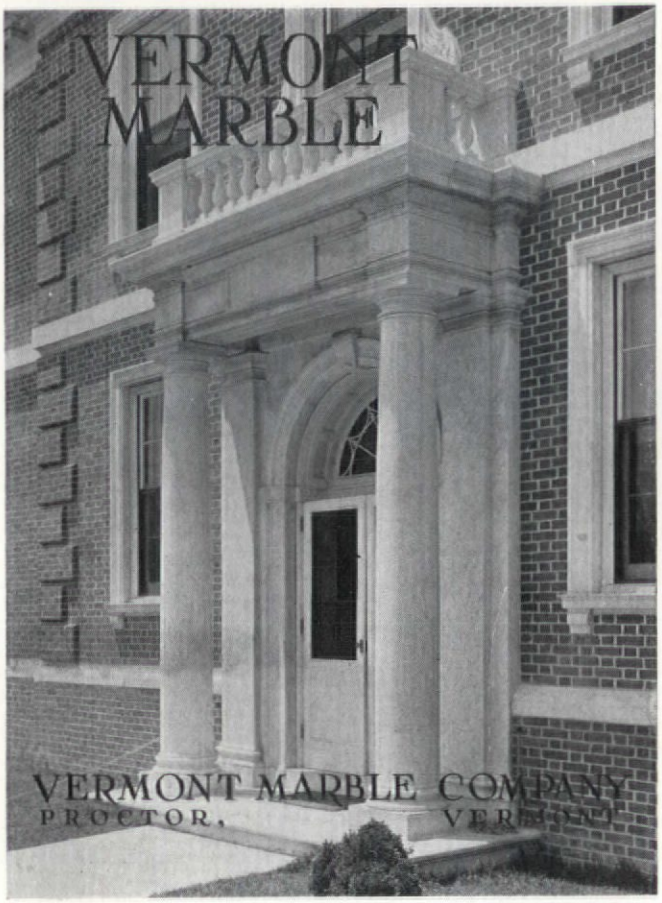
See Sweet's pages B2408-2412

NORTON DOOR CLOSER COMPANY

Division of The Yale & Towne Mfg. Co.

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NORTON DOOR CLOSERS



THE CUTLER MAIL CHUTE

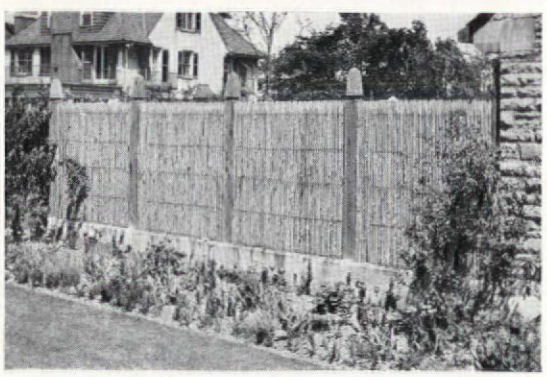
Combines in the perfected Model F the result of long experience in meeting the exacting requirements of public use under Post Office Regulations — and the latest architectural development.

Simple and substantial in construction, durable in finish; with an interesting series of stock and semi-stock Mail Boxes of marked individuality from which to select.

Also intelligent and appreciative execution of special designs in any metal desired.

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never loses its Beauty

A surprising statement, based on simple, undeniable facts: French Provincial Woven Wood Fence is constructed of live young chestnut saplings, hand-split and woven together with Copperweld wire by French craftsmen who are devoted to their craft. Nothing artificial . . . no paint to chip . . . no wire to rust.

And in the natural beauty of the wood lie the charm and distinction of the French Provincial Woven Wood Fence. When erected on your property, you may conscientiously forget it . . . if one can forget what protects and enhances the beauty of his home. In *full* five foot sections, ready to erect.

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Please send me, free of charge, your booklet, "Fence and Defence."

Name .....

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(R-9)



Figure 237
Acid Proof One Piece Laboratory Sink with Back

KNIGHT-WARE is GUARANTEED acid proof and corrosion proof throughout its entire body, withstands the action of acids, alkalies, chemicals and all corrosive solutions and gases, weak or strong, hot or cold.

Unusual **strength, toughness** and **durability,** ease of installation and **inexpensiveness** combined with its acid and corrosion proof qualities make Knight-ware ideal for Waste, Drain and Ventilating Lines, Laboratory Sinks, Sumps and similar acid proof equipment.

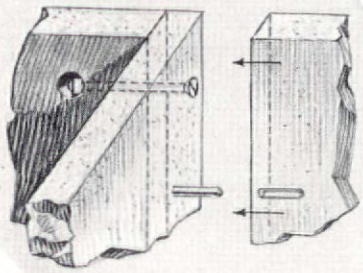
Catalog and Literature Upon Request

Look us up in Sweet's, pages C3950-3951

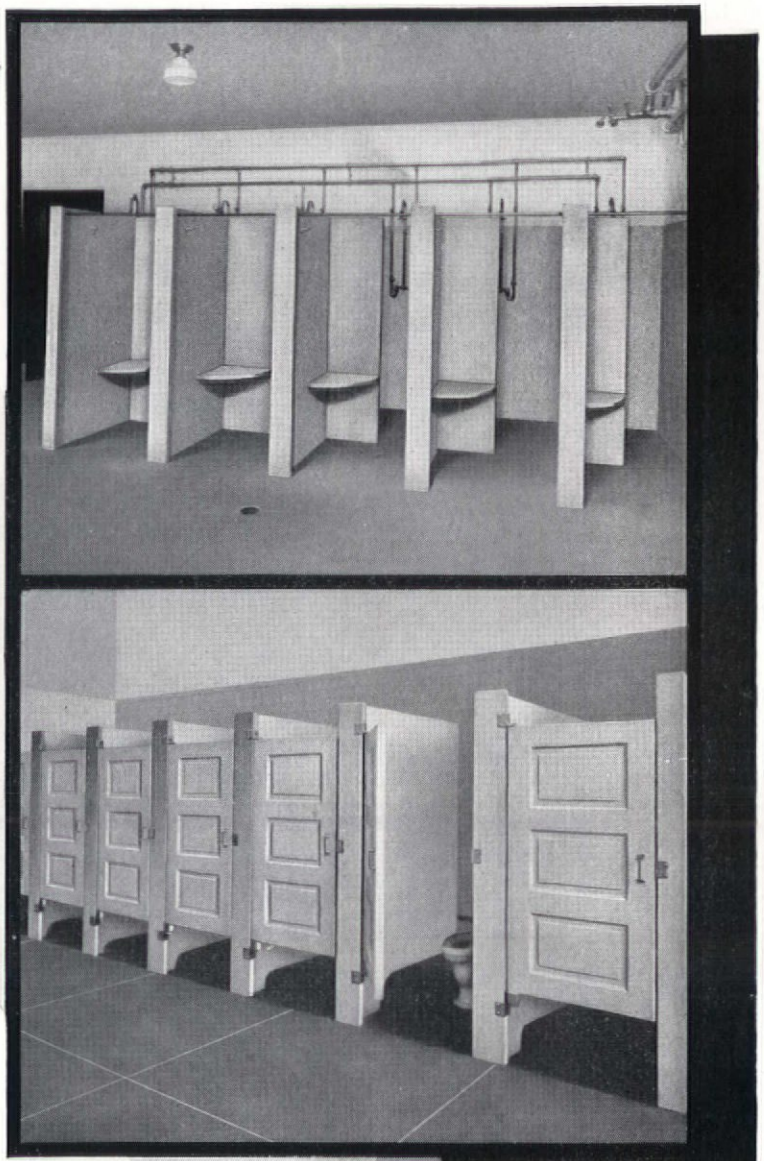
MAURICE A. KNIGHT
AKRON OHIO

KNIGHT-WARE
"IT IS THE BODY ITSELF"

A slightly higher first cost is true economy in unsupervised parts of school buildings-



Method of joining partitions and back slabs.



Alberene construction stands the gaff

THE carelessness and rough usage to which shower and toilet rooms in schools are subjected makes it imperative that partitions be durable. Any attempts at economy through the use of materials which are cheaper and which cannot be fabricated properly for the purpose, reacts unfavorably by increasing upkeep costs.

Alberene Stone aside from its proven methods of construction (rigidity and permanent waterproofness of joints) is selected by architects because it is easy to clean and keep sanitary. Considered from every angle it is the most economical form of partition.

A Bulletin containing details and specifications is available. May we send you a copy? Alberene Stone Company, 153 West 23rd Street, New York. Branches: Boston; Chicago; Newark, N. J.; Washington, D. C.; Cleveland; Pittsburgh; Richmond; Philadelphia; Rochester. Quarries and Mills at Schuyler, Va.

ALBERENE STONE

TOILET PARTITIONS and SHOWER COMPARTMENTS

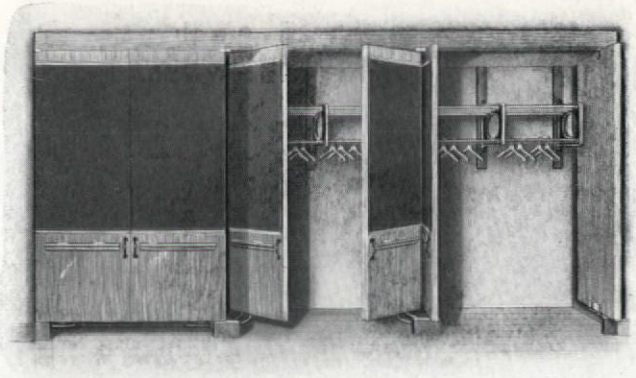
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Soda and Acid Type for free-burning fires in rubbish and textiles where cooling and quenching counts.

Pyrene
FIRE EQUIPMENT FOR EVERY HAZARD

Pyrene Manufacturing Company
NEWARK NEW JERSEY
ATLANTA KANSAS CITY CHICAGO SAN FRANCISCO



Evans "Vanishing Door" Wardrobe Class B-B without jambs or trim

THE wardrobe illustrated is made for plaster ends, backs and ceilings. No jambs nor trim required; only doors, fillet, hinges and interior of racks and garment hangers completing the installation.

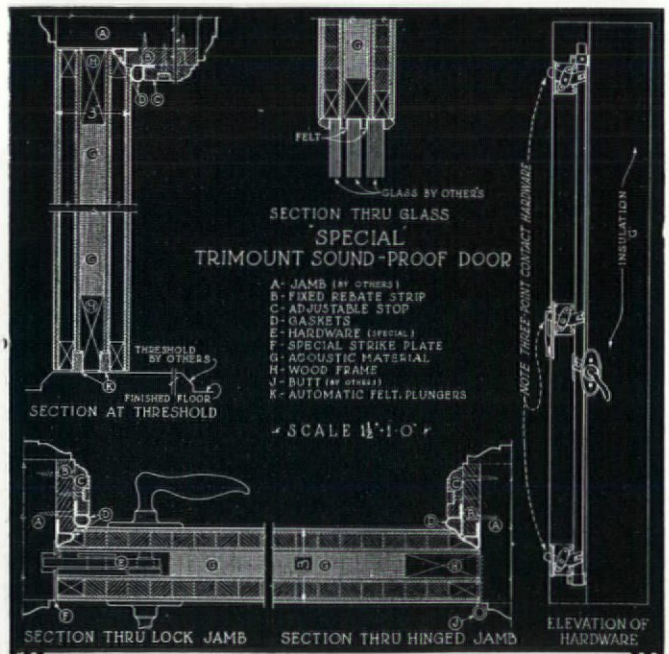
The hinges used are of heavier construction than any previous manufacture and are unconditionally guaranteed to last the life of the building. There are no noisy tracks nor rollers to stick or bind, nor intricate mechanism to get out of order.

"Vanishing Door" wardrobes are furnished complete in the knockdown. All woodwork is cut to size and only needs nailing in place. The hinges are easier to put on than common butt hinges. The cost of installation is small.

Catalog "K," with specifications and price list, fully illustrates many types of school wardrobes. Write for a copy.

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Washington, Indiana, U. S. A.

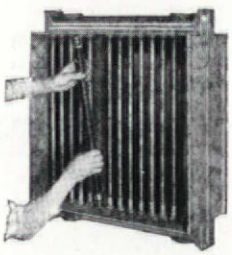
VANISHING DOOR WARDROBES



TRIMOUNT
SPECIAL
SOUND-INSULATED
DOOR

Can be fire-proofed by Pyrono Process.
Prompt deliveries guaranteed.
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St. Joseph, Michigan
AMERICA'S OLDEST VENEERED DOOR SPECIALISTS



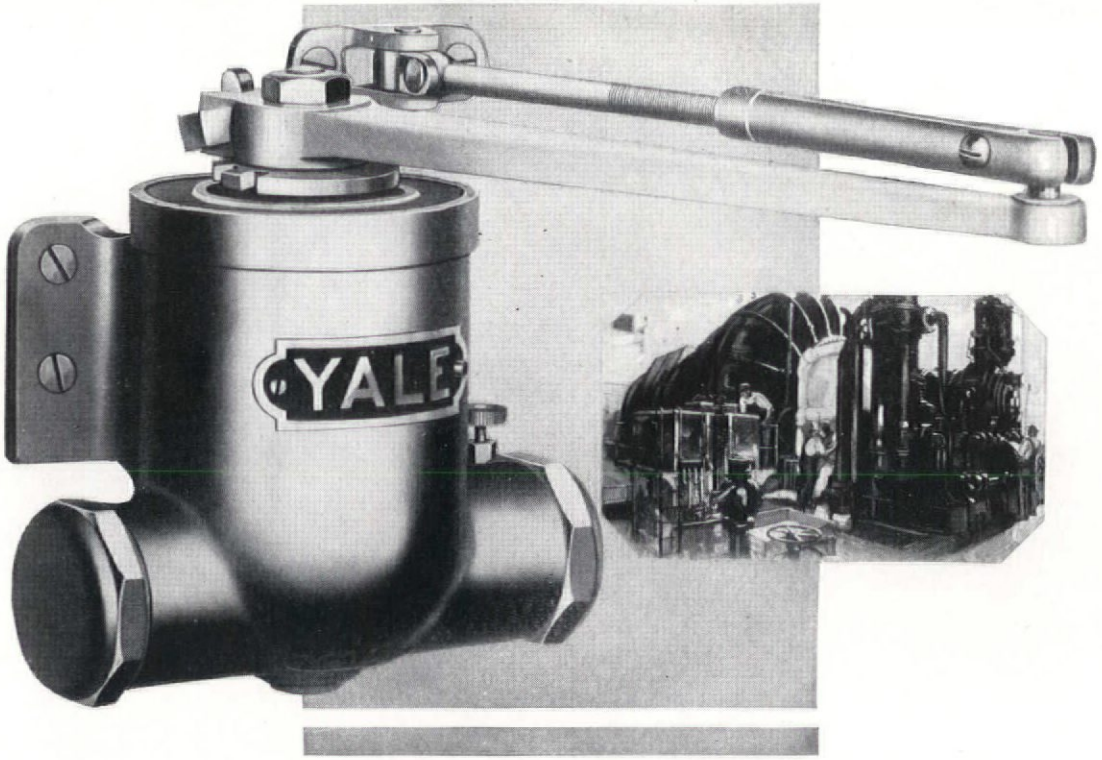
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Successors to the business of Dwyer Equipment Company
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HEAT WITH UNIT HEATERS



TRADE **YALE** MARK

DOOR CLOSERS

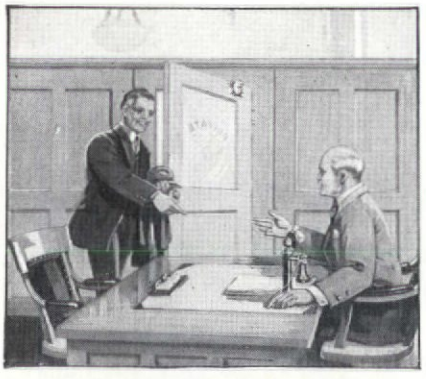
generate their own power

The Yale Door Closer is made with the closest precision . . . generates the greatest power . . . is the easiest to apply.

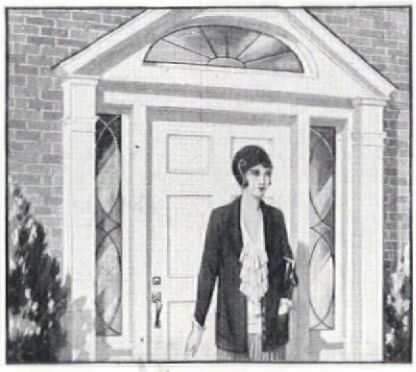
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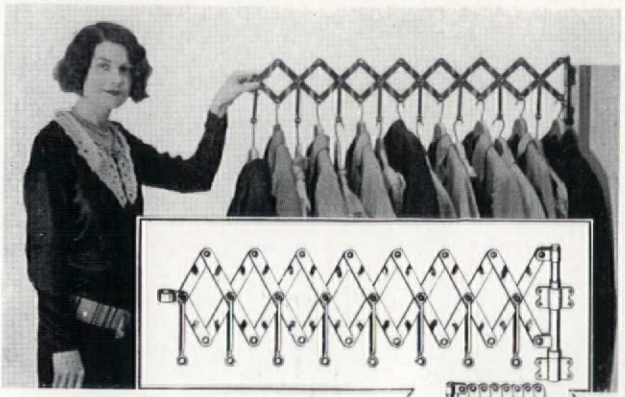


YALE DOOR CLOSER
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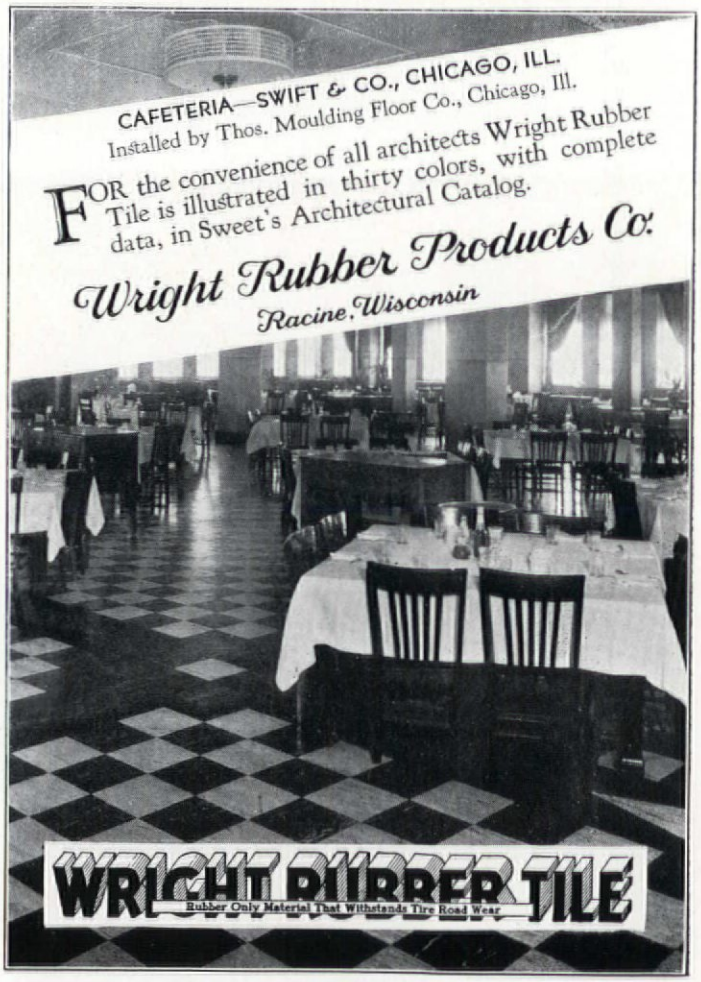
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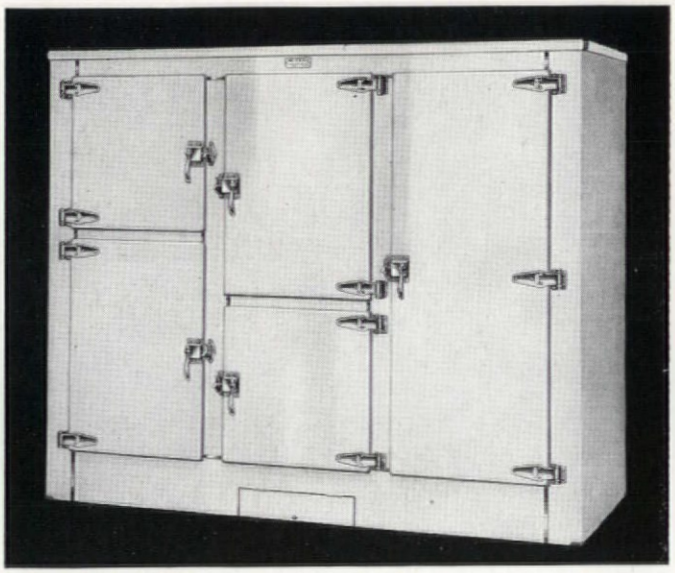


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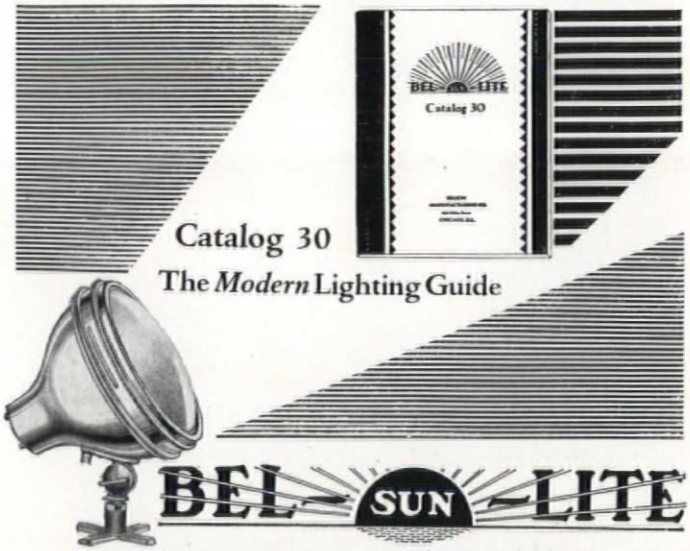


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Catalog 30
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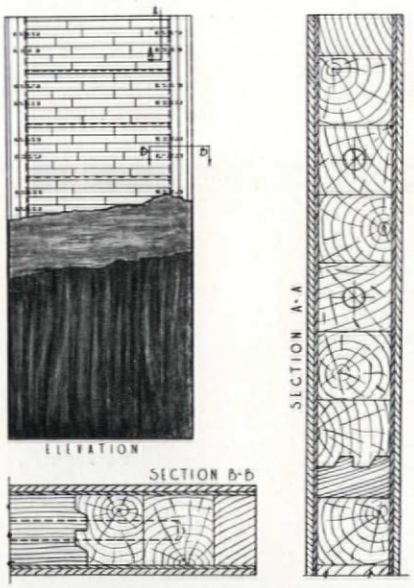
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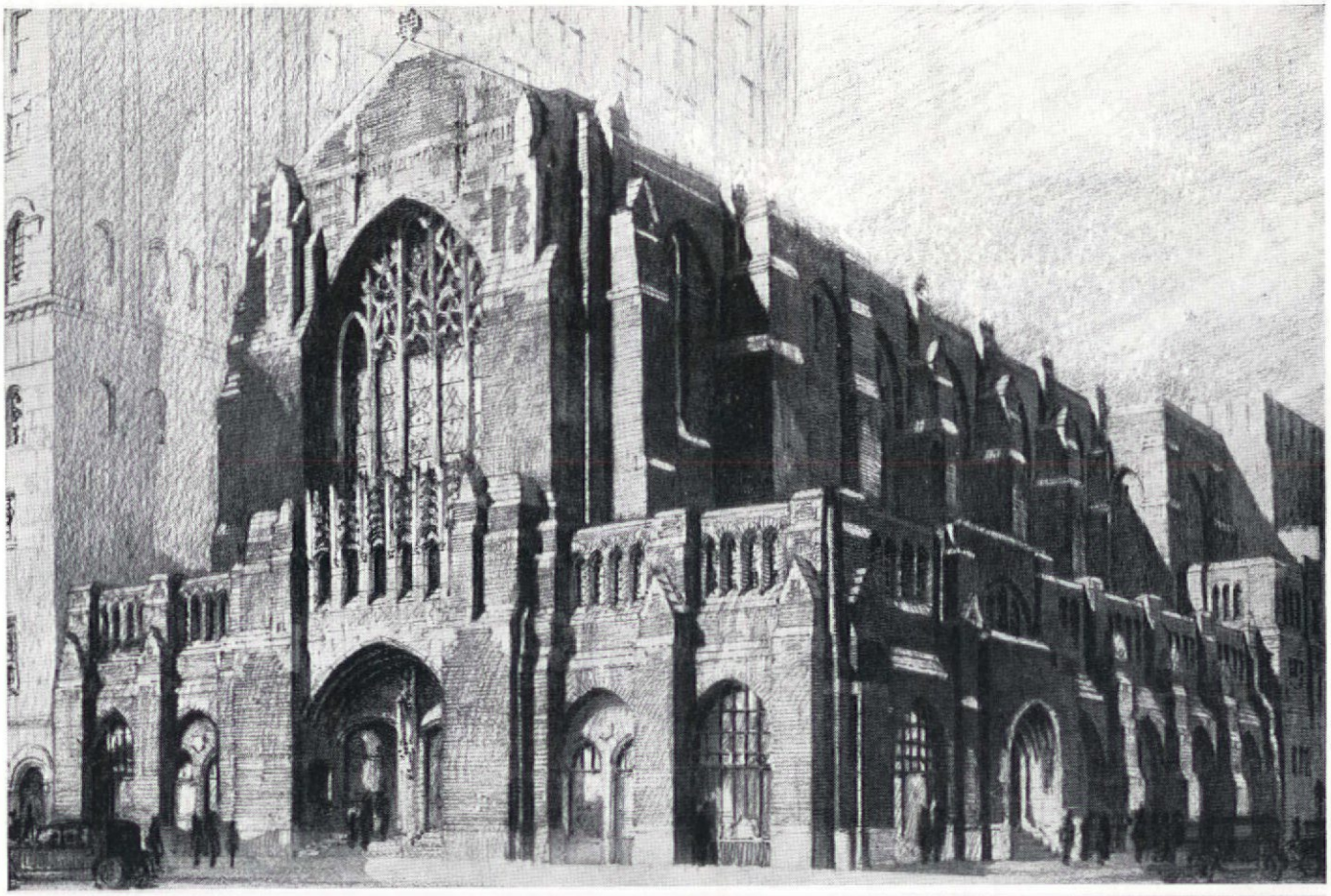
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Architects: Halsey, McCormack & Helmer, Inc.
New York

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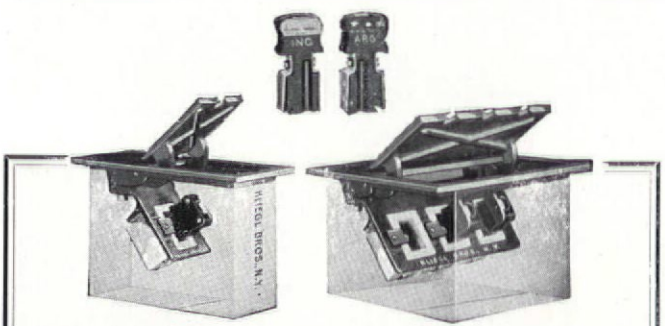
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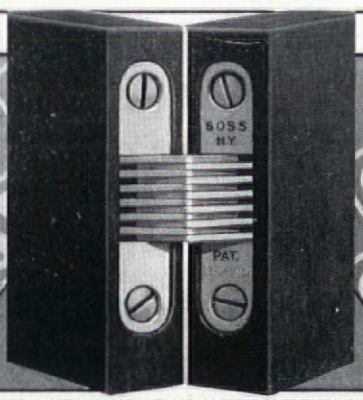
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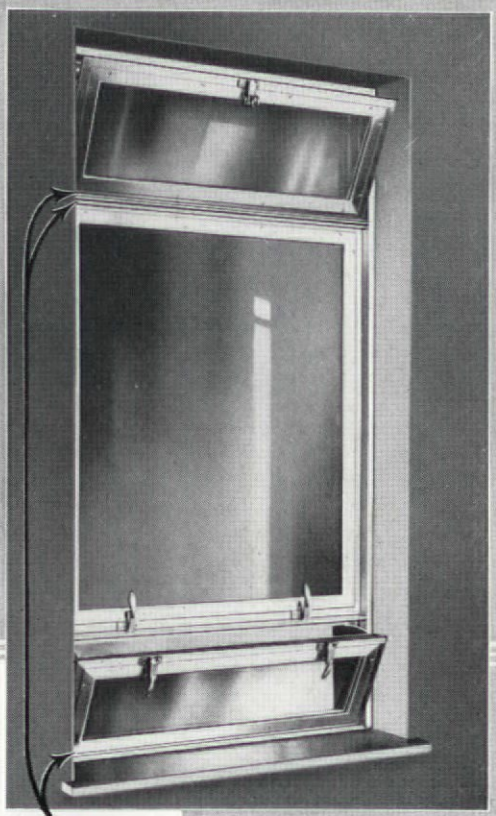
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CLASSIFIED DIRECTORY OF ADVERTISERS

Alphabetical Index to Advertisers, Page 184

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Milcor Steel Co.
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Pierce, Butler & Pierce Mfg. Co.
Smith, H. B., Company, The, Inc.
Titusville Iron Work Co.
Wood Gar Engineering Co.

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See "Ornamental Metal"

Brass and Copper
See "Copper and Brass"

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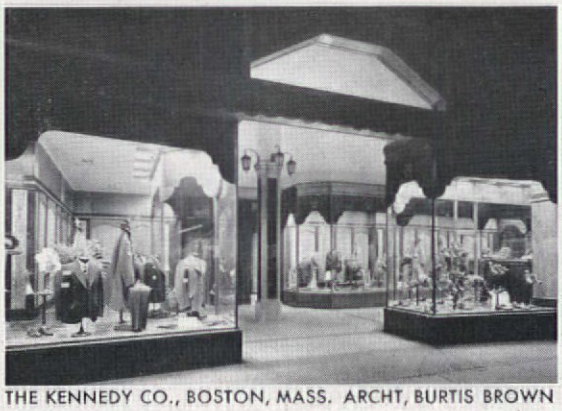
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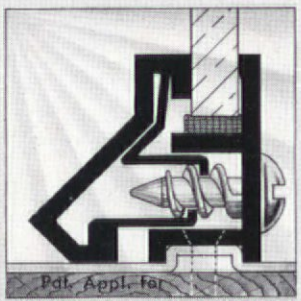




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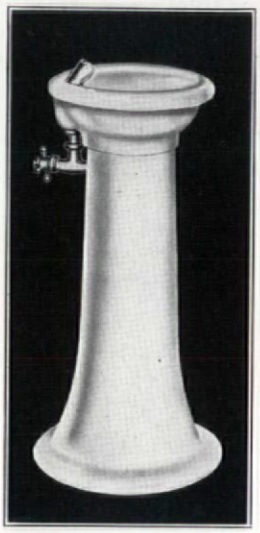
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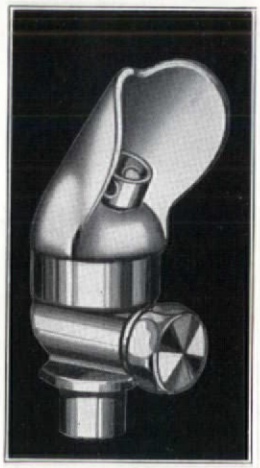
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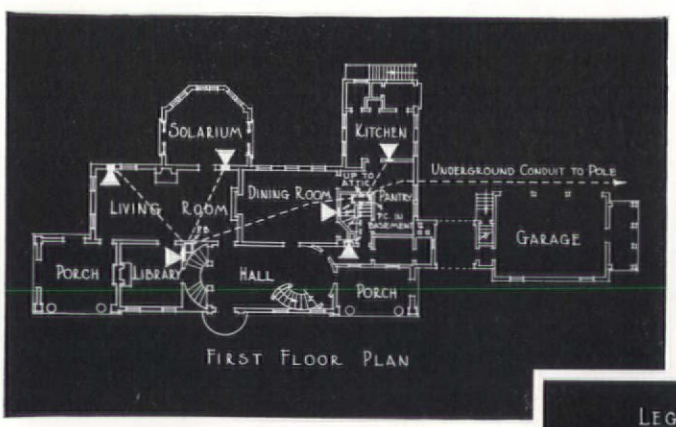
Thirteen telephone outlets, including one in the servants' quarters over the garage, provide for complete telephone convenience in the home of Dr. LeRoy Childs, Tuxedo Road, Atlanta, Georgia. Conduit for the telephone wiring is built into the walls and floors. HENTZ, ADLER & SCHUTZ, Architects, *Atlanta.*

A mark of a well-planned home

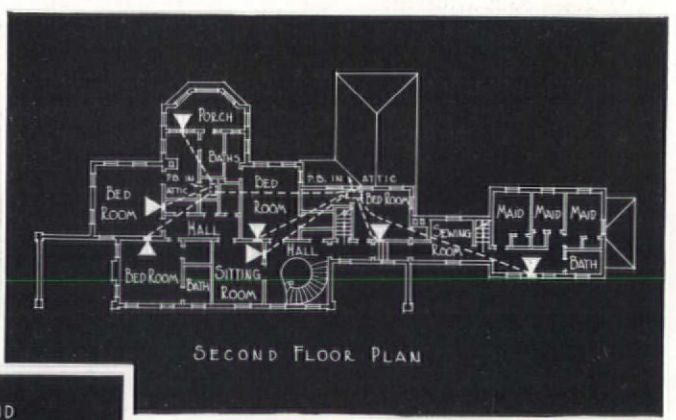
AMONG the important features of a home which contribute to the ease and comfort of the occupants is *telephone convenience* . . . that modern note which should be considered in the early stages of planning for a new home or remodeling an old one.

Planning in advance the provision for telephone convenience in a house makes possible the placing of conduit within the walls and floors during construction. This improves the interior appearance by concealing the telephone wiring; insures against certain kinds of interruptions in the telephone service; and provides for complete convenience by making telephone outlets available in all the important rooms. The occupants can use whichever outlets they wish, and can easily expand or rearrange the telephone service to meet their changing needs.

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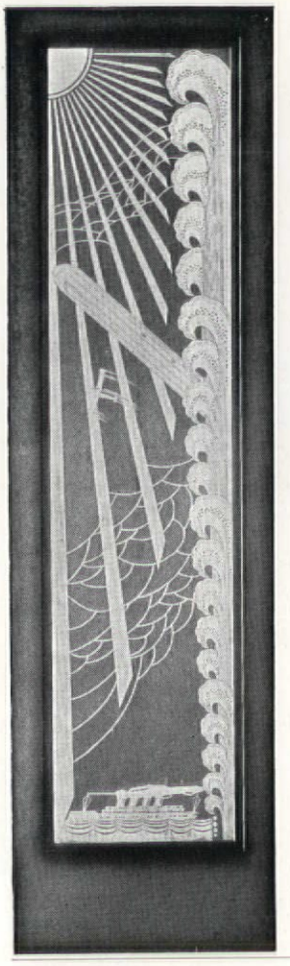


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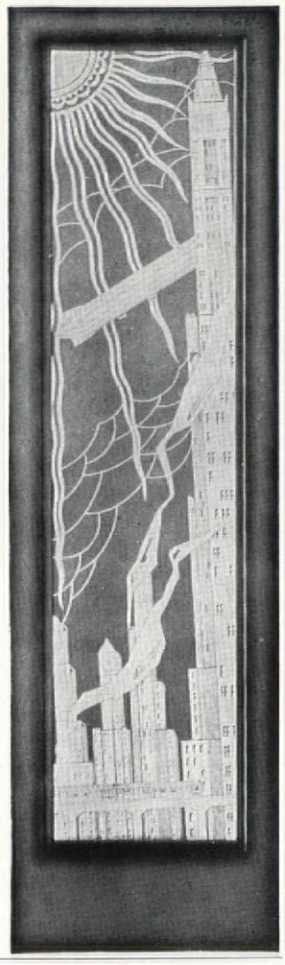
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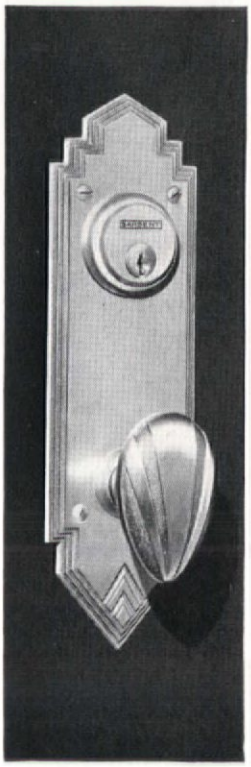
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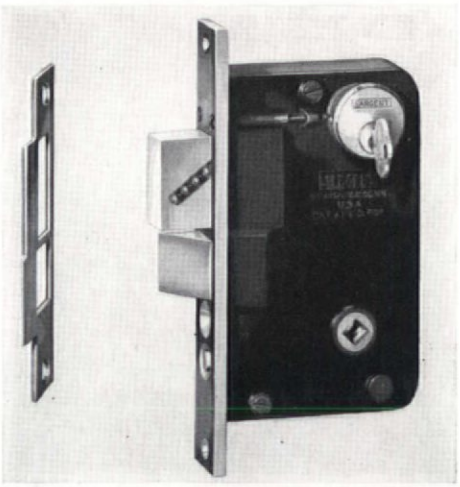
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55 Central Park, West, New York City, Schwartz and Gross, Architects



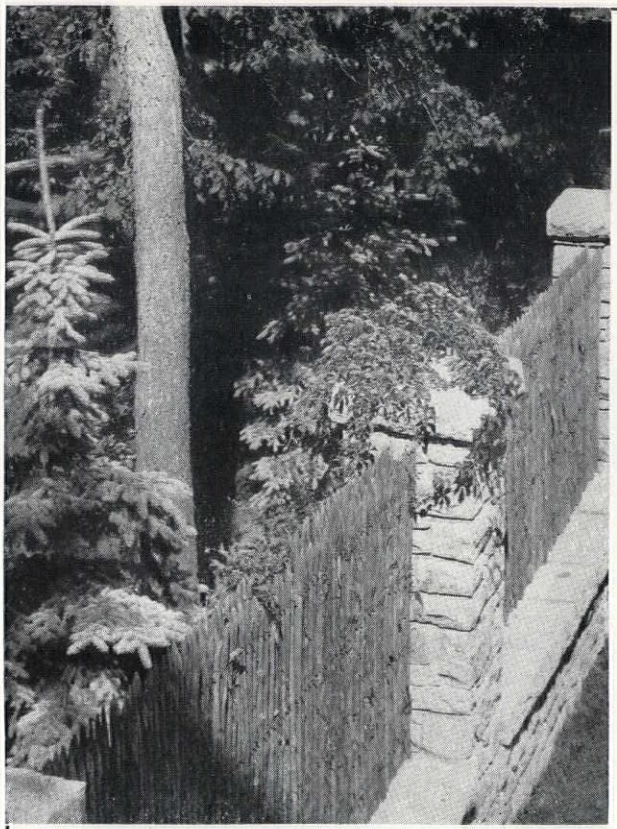
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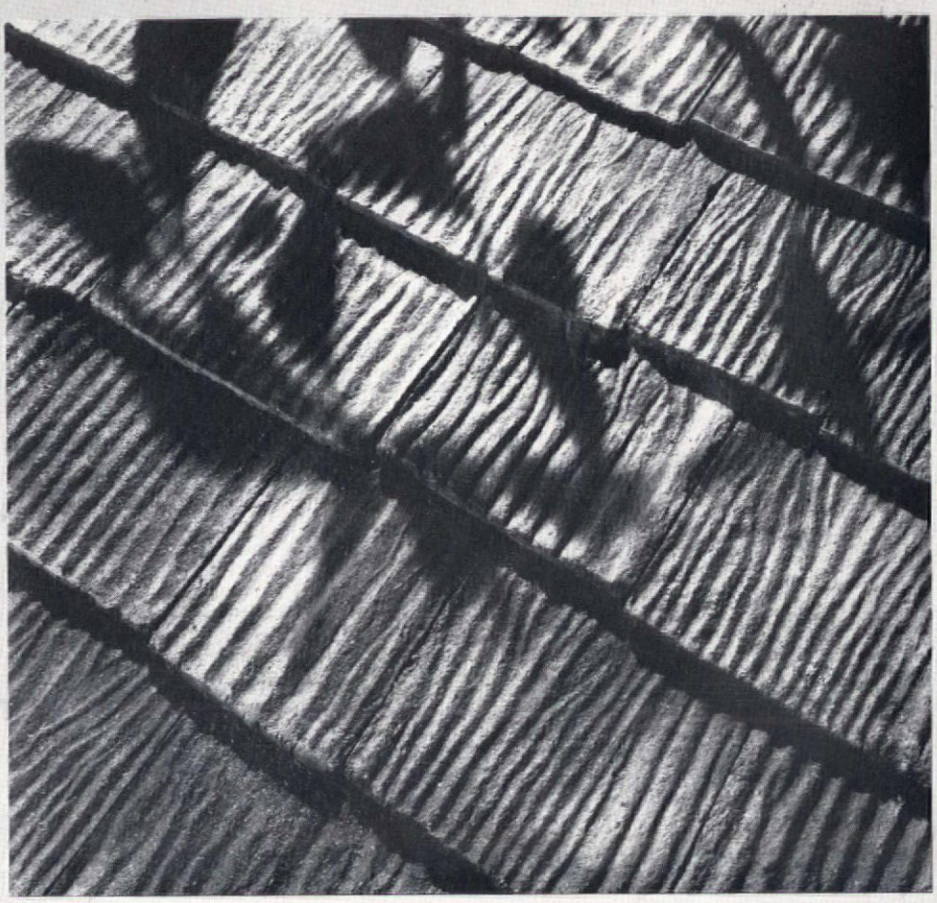
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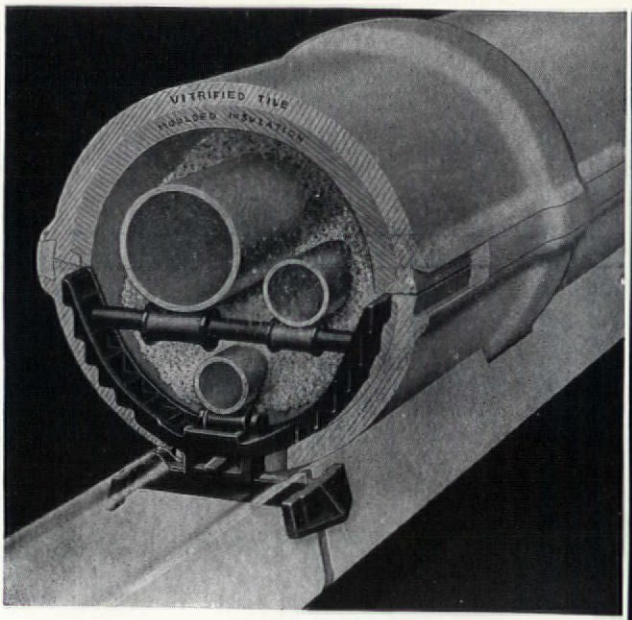
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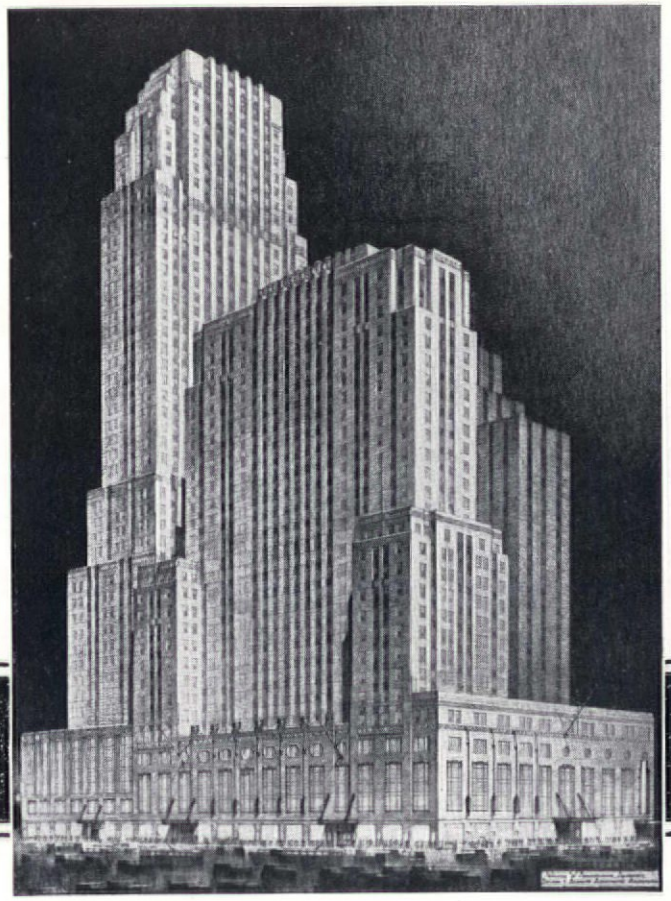
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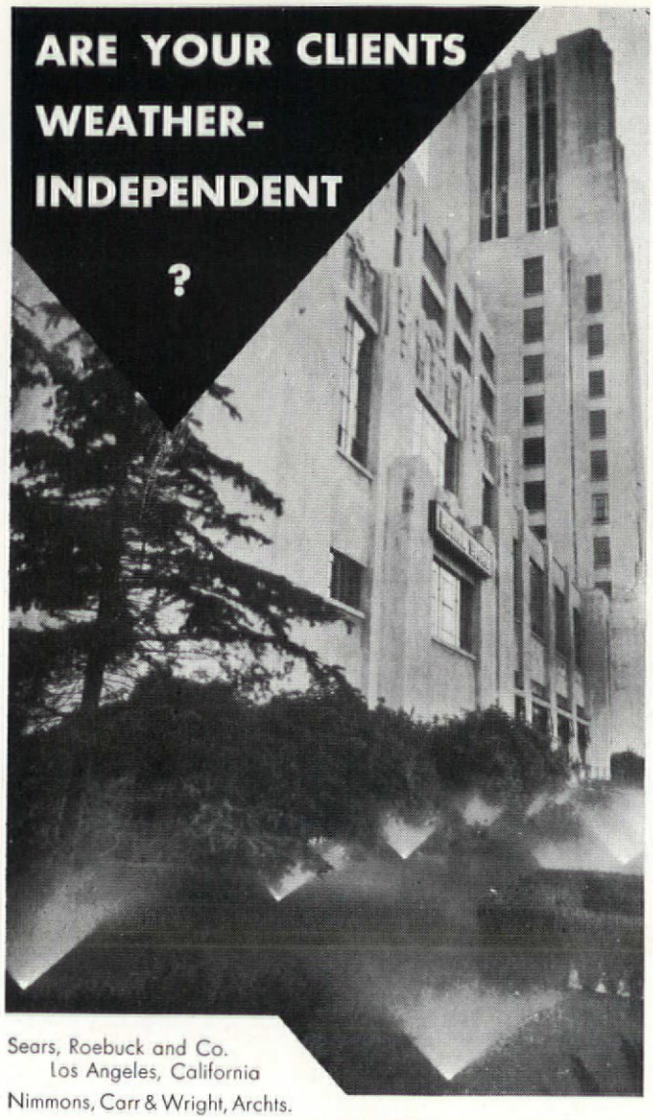
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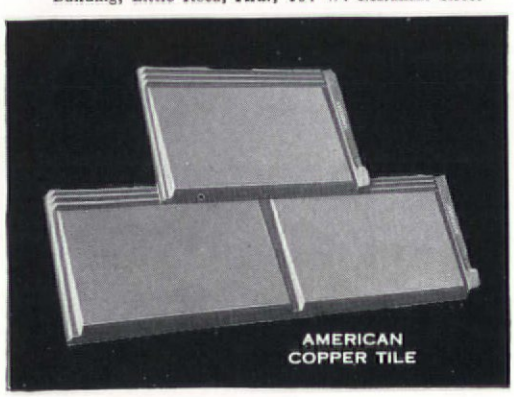
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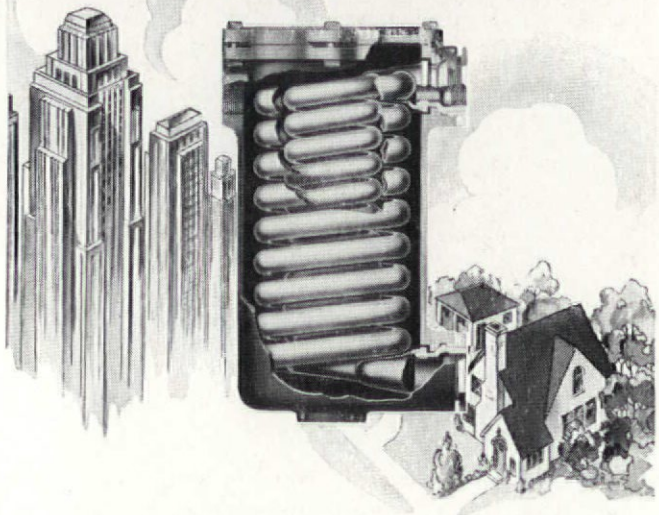
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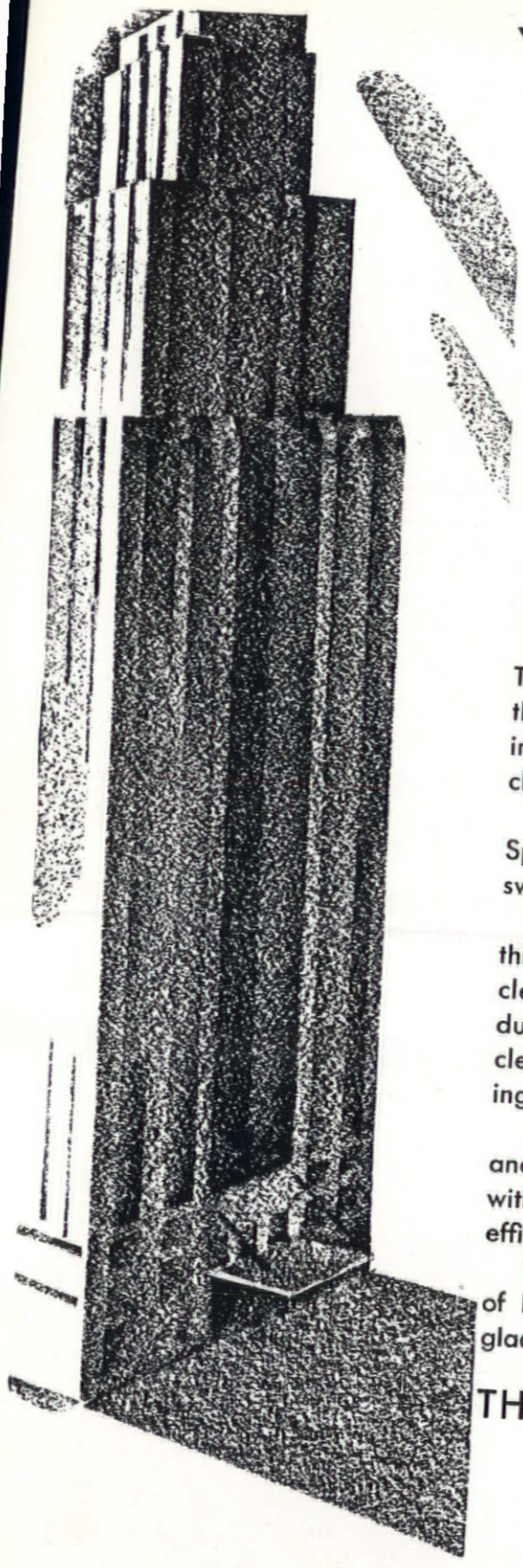
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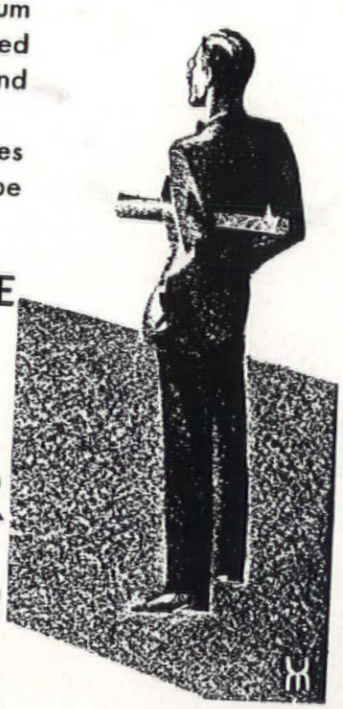
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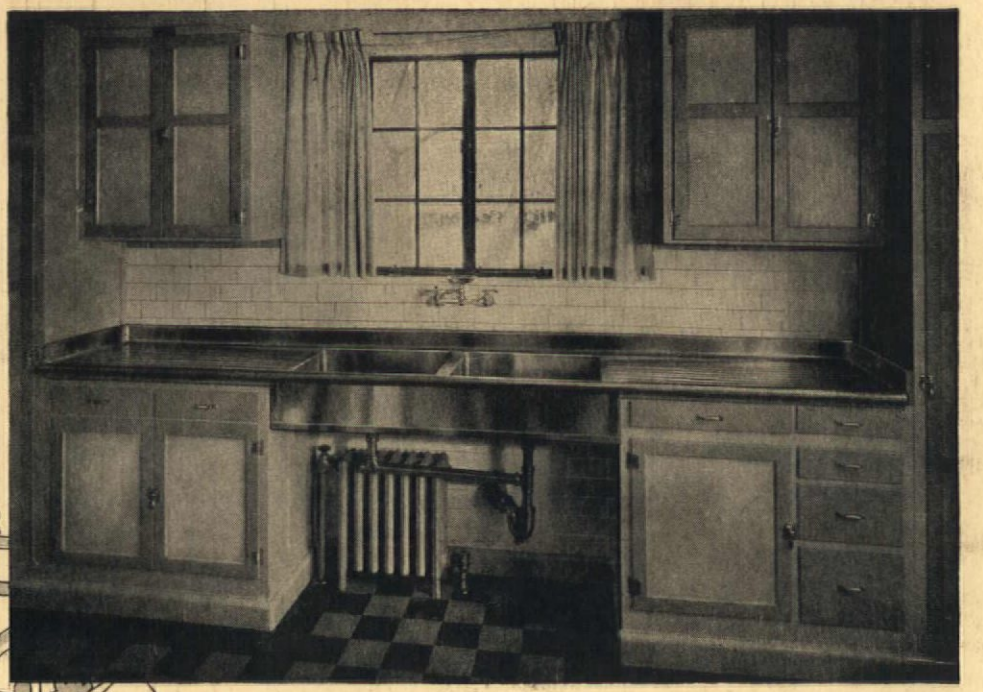
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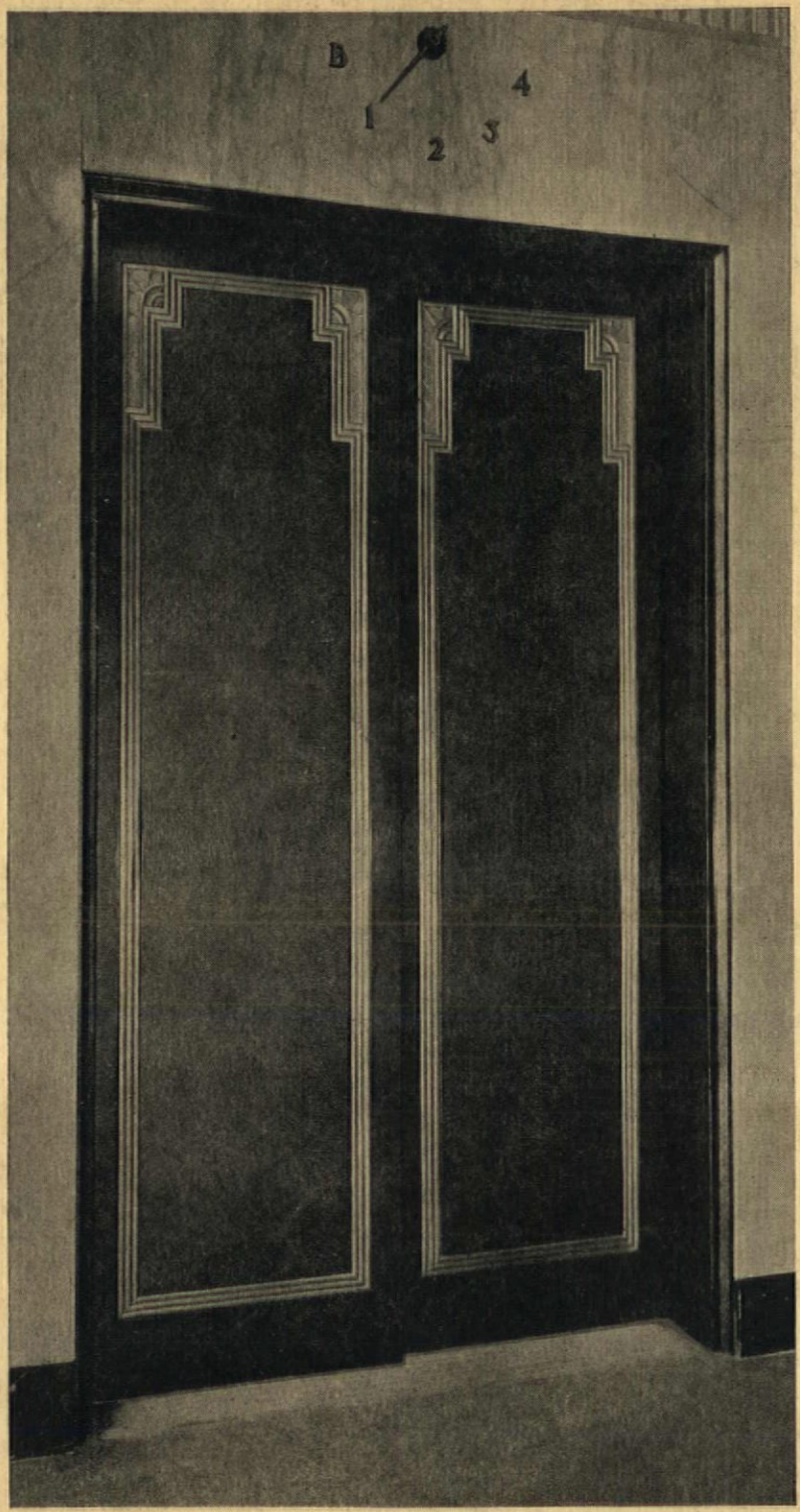
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